

SOME REFLECTIONS ON THE 1968–93 SNA REVISION

BY MICHAEL P. WARD*

*UN Intellectual History Project, Ralph Bunche Institute for International Studies,
The City University of New York*

The 1968 System of National Accounts (SNA 68) represented an important milestone in national accounting. In providing a more detailed structuring of the economy and integrating a correspondingly more relevant system of basic, producer and purchasers' prices by commodities and industry sectors, it helped lay to rest the early schism that developed between Keynes and Tinbergen over the question of the legitimacy of empirical economic modeling. The system was readily embraced by the advanced countries of Western Europe because it responded directly to the contemporary political imperatives of development planning and the need for economic forecasting models. But a large part of the non-Western "free world" encountered almost insurmountable difficulties in the full implementation of the system and became quickly bogged down in the quagmire of inter-industry statistics and valuation problems. Nancy and Richard Ruggles pressed for a revision providing workable solutions that would make the system more adaptable to the policy needs and statistical capacities of the majority of UN member countries. What actually happened took very much longer to reach fruition than was ever intended. The SNA 93 now represents the "gold standard" for national accounts, covering every aspect of economic activity. It is a masterpiece of conceptual coherence. Its encyclopedic character allows analysts and practitioners alike to dip into its voluminous pages for reasoned answers to why certain valuation questions and estimation procedures should be dealt with in a particular way. But SNA 93 remains a formidable document and it is not the operational data friendly framework that the Ruggles initially had envisaged.

1. INTRODUCTION

This article argues that the trajectory of the SNA Revision between 1968 and 1993 began on the right path but then lost its sense of direction, falling short in providing the practical statistical guidelines that many developing countries were looking for in a manual to help them prepare their national accounts and thus curtailing its universal implementation as a meaningful standard operational framework for policy analysis. Two points emerge. First, significant political and analytical changes occurred in the economic policy environment between 1968 and 1993 that altered the emphasis on the national accounts and, rightly or wrongly, shifted the focus of policy to other areas. Second, the pursuit of a "gold standard" did not take into account the statistical capabilities of some three-quarters of the member countries of the United Nations.

Note: I am most grateful to Helen Tice and to Rob Edwards and Paul McCarthy of the Australian Bureau of Statistics and to an unknown referee for very helpful comments on an earlier draft of this paper. In no way should they be held accountable for the views expressed here. I should also like to express my appreciation to the University of Indiana Press for allowing me to use some selected material gathered for my book *Quantifying the World* prepared under the auspices of the UN Intellectual History Project. Natasha Tin Mya kindly helped with successive revisions of the draft and her patient, loyal support is gratefully acknowledged.

*Correspondence to: Michael Ward, 2a Waddelow Road, Waterbeach CB5 92A, UK (mward39uk@yahoo.co.uk).

The revision started as a simple exercise to facilitate the work of SNA compilers and to satisfy the needs of policy users of national accounts. The revision process progressed from the elegant and sophisticated framework of the 1968 SNA in which the highly defined detail of a keenly observed structure of economic relationships had been articulated, to a more comprehensive system that laid out the underlying conceptual logic and theoretical assumptions of national economic accounting.¹ Clearly, none of this is wrong nor irrelevant, but the emphasis leaves much to be desired in the “real politick” of much official decision making. What happened to the original objectives and why did they get modified?

The adoption of the SNA assumes there is a standard underlying economic model that serves all countries equally. That is why so much attention was paid in the 1993 Revision to the conceptual framework. The approach suggests that a separate “development economics” does not exist alongside the main stream of economic theory. The off-shoots from the 1968 SNA—the SAMs, satellite accounts and the various Seers modified supply and disposition tables—can all be seen as innovative attempts to get around some of the policy impasses posed by the detailed system and to deal with divergent aspects of the development process. These issues were not entirely resolved by the introduction of the 1993 SNA.

Part of the explanation for why there was a change in the original intention may lie in the fact that the SNA revision process no longer primarily represented the outcome of the efforts of one person or institution but became the consensus of an international committee (the Inter-Secretariat Working Group on National Accounts or ISWGNA) representing the major international agencies, none of which is a primary producer of “national” accounts. In due course, the group would consult with various meetings of experts convened specifically to consider the group’s proposals for the revision process, but these reviews really came too late to make any significant difference to the “fait accompli.”

The original terms of reference for the ISWGNA instructed it only to consider relatively minor adjustments and revisions, but the group went on to undertake a sweeping historical, conceptual and theoretical review of national accounts and its component structures. In conducting a fundamental revision, the group undoubtedly made a valuable contribution to the essential foundations of national accounts. It came up with a comprehensive accounting system detailing the market and non-market activities conducted by resident institutions, distinguishing between who “uses” and who “pays” for different goods and services. This fully incorporated and appropriately integrated both observed and imputed economic transactions. An accounting basis of valuation that measured exchange at the time of the reported change of ownership of the assets and goods and services concerned was applied throughout which had implications for the harmonization of the SNA with other systems such as the IMF’s Government Finance Statistics and

¹Quesnay’s legacy in the “Tableau Economique” is clearly evident in the 1968 SNA. Quesnay is widely recognized as the lead figure of the physiocrats; he was admired and consulted by Adam Smith in preparing *The Wealth of Nations*.

the Balance of Payments Accounts.² But although national experts were brought in to support the work of the ISWGNA,³ somehow the more immediate practical problems of data collection and compilation were overlooked and accorded less emphasis.

The other part of the explanation lies in the challenges posed by the increasing complexity of the economic and financial systems and rapid technological changes that policymakers and statisticians had to confront. These became a significant force behind the 1993 revision, as electronic transfer mechanisms, intellectual capital, financial services and other intangible activities assumed growing importance and posed increasingly difficult measurement questions. These phenomena occurred independently alongside a fundamental re-thinking of economic theory and policy. The “new economics” directed attention to productivity and efficiency and advanced in parallel with a change in emphasis on institutional structures that responded to a new political preference for the market and a significant downsizing of the role of government.

2. NATIONAL ACCOUNTS; EMPIRICAL PROFILES OR PLANNING AND POLICY FRAMEWORK?⁴

The first 1953 national accounts provided a consistent set of descriptive macroeconomic balances summarizing the main transactions of the economy. In comprising only six main tables, it nevertheless proved extremely useful for fundamental policy review and as a tool for weighing alternatives and directing postwar reconstruction efforts in a time of resource scarcity. The subsequent introduction of the 1968 SNA with its inter-industry sectoring enabled policymakers to undertake a more extensive analysis of the economy. Economies were also becoming rapidly more complex as many emerged from postwar stringency and governments began to show more concern with raising consumption and improving living standards.

²Significantly, beyond this strengthening of the internal coherence of the national accounts, there were major complementary efforts to harmonize the definitions, classifications and methodologies of other integrated and closely linked systems with the SNA. In particular, extensive work was carried out by the IMF to ensure that the new system of government financial statistics (GFS) with its associated structure depicting the functional allocation of current expenditures by both central and local (including municipal) governments, as well as the revised *Balance of Payments Manual* (BOP), were completely compatible with the national accounts. For the government accounts this meant switching from reported cash outlays to a commonly accepted accrual basis of accounting. For the balance of payments, similar adjustments in procedures were needed to distinguish between income and transfers. More attention had to be paid to the timing and valuation of transactions relating to the change of ownership of assets, especially if they were deemed intangible.

³Many people from different institutional and national backgrounds participated in the production of the 1993 SNA including consultants and advisers who attended a series of special expert group meetings and contributed to the final version of the text. The Statistical Commission, in approving the manual and the work of Group, paid particular tribute to Peter Hill and André Vanoli as the primary authors of this benchmark reference study and accorded due recognition to Carol Carson, new Director of the Statistics Department of the IMF, for her invaluable management of the revision.

⁴I have been much helped here, and in some later sections, by a short piece written by Derek Blades for internal use in the OECD entitled “A Brief History of the UN System of National Accounts.” Its author should be in no way held to blame for the emphasis placed in the ensuing paragraphs.

The switch in emphasis in national accounting between 1953 and 1968 also reflected a surreptitious shift in the emphasis of macro policy formulation. It moved policy thinking away from descriptive *ex post* evaluation and “learning from experience” (suggesting attempts to avoid the major mistakes of the past), to an approach that was more *ex ante* and strategic and looked ahead to desired targets and indicative goals. The 1968 SNA was a major leap forward in providing a framework for projecting these alternative, internally consistent policy scenarios. In introducing more dynamic properties into the accounting process, the system helped policymakers to focus on the need to put in place appropriate policy instruments to achieve specified goals. It also emphasized the respective use of relevant fiscal and monetary tools to ensure the “engine” of the economy delivered an appropriate, well balanced growth performance. This, in due season, would allow various desired social objectives to be achieved.

Richard Ruggles, who had joined Milton Gilbert at the OEEC (now OECD) in the early postwar years in order to help implement the Marshall Plan, would have been no stranger to the ideas and methodology of public planning and targeted investment strategies. Richard understood the forces compelling the need for the 1968 SNA and was impressed by its logic even if he felt less persuaded as to its statistical feasibility. He and Gilbert strongly advocated the need for statistical tools to evaluate alternatives, and they played an important role in establishing the national accounts statistics section at the OEEC. The merits of coordinating the allocation of scarce resources to conserve effort and maximize efficiency gains by avoiding unnecessary waste and duplication would have been particularly evident in the post-war period. The 1968 SNA was a quantum step that moved the resource allocation question forward. The system reflected the rapidly growing economic complexity and pace of economic expansion, specifically in OECD countries, and underlined a continuing belief in the need for governments to play an intimate if not direct role in controlling the economy.

The strength of the 1968 SNA was that it provided a recognized core inter-industry structure that allowed researchers and analysts to venture off independently in very different but quite logical and consistent directions. Even more important, through the input-output methodology, it introduced a fundamentally systemic approach to dynamic analysis that could be applied to social as well as economic change. Stone, the mastermind behind the 1968 SNA, had already employed the proposed basic framework in the empirical research he directed at the Department of Applied Economics in Cambridge to produce a computable model of economic growth for the UK economy. In his subsequent (1972) proposals for a System of Social and Demographic Statistics (SSDS), Stone foresaw how the social framework could be readily integrated into the economic model to provide an even more comprehensive planning mechanism. In the contemporary era of planning, the techniques appealed to most governments in Europe, and this proposed “holistic” approach seemed the right way to go. But the 1968 SNA specifically failed to give the developing countries the appropriate evidence based power to tackle the important institutional challenges and international trading problems they particularly faced and still face. The 1968 SNA was primarily an “internally” focused system when the main issues confronting most developing countries were dominantly “external” and related to their political and economic

dependence on the international economy. Their lack of sovereignty in the face of the domestic operations of foreign companies and weak involvement in international trading relationships severely limited their capacity to implement plans for development.

3. INTERIM ACCOUNTING INITIATIVES TAKEN TO DEAL WITH EMERGING CONCERNS 1968–93

The apparent operational faults of the 1968 SNA were not primarily of its own making. Although the 1968 system did incorporate an implicit fixed technology inter-industry framework of the conventional Leontieff type, its respective coefficients were not, in practice, immutable. The core inter-industry model was quite sophisticated in distinguishing separate “make” and “absorption” matrices reflecting the output and use of both industries and commodities.⁵ This allowed analysts to look at the intermediate and final output responses of the economy to different patterns of demand. Policymakers could explore the associated implications for input purchases and how consumption impacted on the demand for imports for both intermediate and final use. The demand (income related) elasticities and marginal propensities to consume and to import could be estimated and worked back into the system of demand equations and underlying input-output relations. The development of computable general equilibrium models advanced a great deal faster in the following years. In this connection, agencies employing the 1968 framework for planning purposes had to give significant attention to the crucial questions of endogeneity when projecting price and output changes. The 1968 framework especially drew attention to the more sophisticated analysis required to understand absolute and relative price changes.

Because it combined, within the same structure, an inter-industry table with the standard national accounts relationships, the 1968 SNA had perhaps an unintended effect of setting off some macro-statistical research in a separate input-output direction. Some of this, like the social accounting matrix (SAM) work pioneered by Thorbecke,⁶ on the one hand, and by Pyatt (an early associate)⁷ and his colleagues at the University of Warwick on the other, was extended further by Keuning in the Netherlands. The SAMs developed the SNA in both a social and environmental direction. Despite the sophistication of the SAM framework, these new initiatives constituted a logical step for improving the analytical potential of the SNA. Moreover, the systemic logic and dynamics of the SAM model and its relevance to the important distributional issues originally brought to public attention by the Ruggleses, but previously overlooked in the UN Statistical Office, was simple to understand.

The practical feasibility of a SAM was well demonstrated by case studies conducted in Indonesia, Sri Lanka, Malaysia and Botswana which showed that the

⁵UN Department of Economic and Social Affairs, *Use of Macro Accounts in Policy Analyses*, Handbook of National Accounting, Series F, No. 81, United Nations, New York.

⁶Irma Adelman and Erik Thorbecke (eds), *The Theory and Design of Economic Development*, John Hopkins Press, Baltimore, 1966.

⁷Graham Pyatt and J. I. Round (eds), *Social Accounting Matrices: A Basis for Planning*, World Bank, Washington, D.C., 1985.

SAMs were operationally feasible, even if also very data intensive, and that they could be applied to a general equilibrium model and used for planning and evaluation purposes. The SAMs called for the detailed elaboration of different patterns of household demand according to certain significant distinguishing socio-economic characteristics, such as income levels, educational qualification or employment status which could readily stand as proxies of economic and social “class.” Significantly, the SAM compilers quickly drew attention to the fact that low incomes (and hence conditions of poverty) could not be adequately analyzed without reference to the nature of an individual’s engagement in the economy and its related institutional structure. This work pointed investigators, appropriately, in the direction of household income distribution analysis, an area significantly neglected in many countries but crucial to an understanding of the relationship between growth and the well-being of different social classes. More recently, extensions to the SAM approach have been applied to particular advantage in making policy focused environmental assessments (e.g. the Dutch “NAMEA” system⁸).

Compared with the two-dimensional price structure of the 1953 SNA that could be observed only in the consolidation of transactions in the distinction between “factor costs” and “market prices,” the 1968 SNA and later SAMs recognized that the observed prices at which expenditures took place comprised three distinct elements; the main part attributable to the intrinsic (physical) nature of the item or service in question, a transport and distribution margin (applicable also, in some cases, to services) and a provision related to the respective “product”, or commodity, taxes specifically levied on different goods (and services). The system could thus define “basic,” “producers” and “purchasers” prices in a logical transactions context. The distinctive “service” components embodied in goods themselves, as well as the “goods” components in some services trade (such as shampoo and dyes in hairdressing salons) could also be identified in the SAM approach. This all important “decomposition” of prices had considerable significance for both fiscal policy assessment and competitive market analysis.

A declared aim in developing these more elaborate data structures, even for simpler economies, was to keep the SNA as a whole relevant to policy needs and objectives. This could be set against the background of a continuing debate— influenced by the writings of people such as W. Arthur Lewis, Hans Singer, Gerald Meier, Hla Myint, and Dudley Seers⁹—about the existence of a separate discipline that could be described as “development economics.” The SNA approach reflected a belief in the essential coherence and general universality of economic laws. At the same time, both the SNA and the SAMs recognized the all pervasive and persuasive influence of institutional circumstances and how these could sometimes exert quite perverse effects on social and economic behavior.

Another high profile “technical” group branched off in a separate statistical direction. This took to extending the theoretical logic and “mechanics” of the

⁸S. Keuning, “What’s in a NAMEA?” Paper presented to the 26th General Conference of the International Association for Research in Income and Wealth, Krakow, Poland, August 27 to September 2, 2000.

⁹Dudley Seers, “The Limitations of the Special Case,” *Bulletin of the Institute of Economics and Statistics*, 25(2), May 1963; W. Arthur Lewis, *The Theory of Economic Growth*, George Allen and Unwin, London, 1955; Gerald Meier, “Leading Issues in Development Economics.”

embedded input-output analysis.¹⁰ The independent pursuit of input-output based economic models echoed the early schisms between Keynes and Tinbergen regarding the relevance of modeling. Keynes questioned the desirability of integrating hypothetical projections and economic forecasting with empirical national accounts work. The so-called “Tinbergen approach,” however, was favored by Klein¹¹ and others like Edmond Malinvaud because models could be adapted directly to the simulation of various policy scenarios relevant to the style of mixed planning especially popular with the governments of France, Holland and Austria in the postwar period.

The introduction of satellite accounts as a means of incorporating social policy concerns into a macro framework went some way towards integrating the economic and financial side of “progress” with more specific physical measures and indicators of change. They have proved particularly useful in the evaluation of the performance of the health sector and education, taken overall, matching resources and costs with reported outputs and achievements. The objective of this approach has been to measure the respective impacts on households and the society at large of policy changes. More recently, satellite accounting has become the preferred means for measuring sector specific environmental questions and for assessing, for example, the overall value of tourism (as a “cross-cutting industry”) to the economy. Less appropriately, however, the tables have been suggested as a means to tackle more complex conceptual issues like the sectoral allocation of financial intermediation services. The treatment of such questions, however, should remain part of the core financial structure of the accounts.

There was yet a further and perhaps more fundamental adaptation of the original draft version of the 1968 SNA. The 1968 system, when initially drafted, did not serve well the policy requirements of primary producing developing countries, especially those highly dependent on one or two crops or minerals. An addendum to the report, representing a significant modification and simplification of the core system, was thus attached as a supplementary Chapter 9 to the other chapters and main set of tables.

Most of the problems facing the developing countries arose because their domestic economies were heavily concentrated on a non-productive public (non-market) sector that not only sucked in scarce resources but also controlled, managed and financed inefficient state enterprises. In these economies the real resources available to conduct such activities under any form of ownership were usually constrained. Tax revenues reflected the fact that countries were inextricably linked, but far from integrated, into an uneven international trading system over which they could exercise little influence. The activities of resident foreign multinational corporate enterprises that usually controlled the plantation and resource extraction business were frequently supported (usually indirectly but sometimes also explicitly) by policies pursued by the governments of the richer nations where the headquarters of these companies were established. For the poorer, undiversified, primary producing economies, involvement in the international economy tended always to be one-sided, and invariably on disadvantageous terms. International and intergovernmental agreements left the developing

¹⁰United Nations, *Handbook of Input-Output Table Compilation and Analysis*, Series F, No. 74, United Nations, New York, 1999.

¹¹The relevance of the Klein and Tinbergen approach is especially evident in the UN “Link” model.

countries vulnerable to external market risks and potentially exposed to the internal policies of richer countries with respect to tariffs, quotas and subsidies. They found themselves locked into fixed price trade contracts over which they had little or no control. At the same time the developing countries had to satisfy a constant and undiminished local demand for funds to support their governments' own operations. None of these features could be captured satisfactorily in a standard macro-statistical framework like the highly developed inter-industry data framework advanced in the 1968 SNA, advocated by the UNSO for general adoption by the international community. In this new political-institutional situation, the 1968 SNA served little or no purpose in the majority of countries of the world.

It was effectively as a consequence of the recognition of this concern, and almost as an afterthought, that the additional chapter to address the special requirements of the developing countries was introduced into the final document. The simplified "supply and disposition" format expounded in Chapter 9 of the 1968 SNA was frequently adopted and extended for local use. It followed closely the national accounting framework that had been adopted by the French authorities in their own overseas territories and thus conformed closely with what was generally recognized in the international statistical community as the "Courcier" system. The approach was much favored by earlier critics of the SNA like Seers¹² who had given considerable thought as to how best to portray and monitor the changing economic fortunes of less sophisticated economies so as to provide relevant policy advice. A number of countries as diverse as Trinidad, Zambia, Lesotho, Fiji, Oman and Kiribati successfully experimented with this model. The "reduced form" of the supply and disposition framework presented in this last chapter of the 1968 SNA also better suited the evaluation of the various policy aspirations and more limited options of simple agricultural economies with large, dominantly subsistence, rural household sectors. The estimation of the relative importance of the rural household sector requires that a range of specific imputations concerning both volumes and prices should be made.¹³ It is thus not insignificant that the revised 1993 SNA should subsequently attach considerable importance to the proper independent elaboration of the household sector as both a consumer and producer and also because many household transactions are conducted in cash and kind.

4. THE OPPOSING POSITIONS ON REVISION

Only a few years after the 1968 SNA was published, statisticians were already beginning to discuss possible revisions. The system seemed too complex and unmanageable for countries outside the OECD. Experts working in developing countries who tried to introduce the system talked about the need for significant simplification and the desirability of consolidating certain tables so as to concentrate on key features of the basic accounts. Within the UNSO, Nancy Ruggles, as the Head of the National Accounts Division, pushed for a fairly quick and simple

¹²"The Statistical Needs for Development with Special Reference to National Accounting," *IDS Communication*, 120, 1977; "An Accounting System for a Specialized Exporter of Primary Products," Yale Economic Growth Center paper, 1963 (updated with the example of Zambia in I. Adelman and E. Thorbecke, *op. cit.*).

¹³Michael Ward, "An Extension of the UN Supply and Disposition Table for use in Developing Countries," *Review of Income and Wealth*, 18(3), 1972.

revision. Richard Ruggles, as an advisor and consultant to the UNSO, took a similar position but championed the greater integration of micro-data drawn from a variety of sources, but relating particularly to households. He urged that these should be entered directly into the compilation process. He also believed in the data coordinating functions of the SNA and felt this would have an advantageous reverse feedback effect on the quality of basic statistics. The consistency of definitions and classifications adopted in the national accounts could contribute in turn to an improvement in the reliability and intrinsic comparability of the detailed micro-data, and encourage their more widespread use for analysis. National disposable income, in principle, would be decomposed to provide a more coherent and integrated picture of the domestic distribution of individual and household income alongside the conventional national accounts aggregates. This was a critical element missing from most countries' national databases and was clearly important to a better understanding of structural change and its impact.

As the pressure for revision advanced and moved forward, the divergent views on a revision aligned more clearly on opposite sides.

One position, taken by the Ruggleses and UNSO favored a simple updating and the coordination and consolidation of micro and macro approaches. They felt that the slow pace of adoption of the 1968 SNA reflected the apparent complexity of the framework, including the modified definitions of valuation put in place, which had gone from the simple and easily understood "factor cost" and "market price" basis used in the 1953 system to the more precise formulation of price structures demanded by an I-O system to recognize the distinct phases of economic activity. Others, similarly concerned to bring both greater clarity and simplicity to the system, supported the adoption of what were referred to at the time as the traditional "T-accounts." In these standard presentations, which were associated with the Netherlands, data are displayed as payments and receipts, or incomes and outlays, and arrayed in rows in a supply and demand format.¹⁴ These accounts could also be disaggregated, if required, by sectors and activities. They were generally limited to the recording of identifiable monetary transactions. Apart from government, these transactions were compiled on an accrual rather than cash payment/transfer basis. The accounts mostly excluded all imputations and estimates for unrealized gains and losses from current transactions, other than stocks. Supporters strongly argued that the approach was more compatible with actual policy requirements because the accounts supplied data that underpinned the way governments normally worked in framing their decisions.¹⁵

The alternative position belonged to those who took the view that the establishment of a comprehensive and coherent framework called for a fundamental conceptual rearrangement of the accounts that would integrally link prices and quantities to their appropriate actual or imputed values. They expressed unhappiness with the untidy nature of the reconciliation accounts developed for the 1968 SNA that left so much open to question. They argued for the proper integration of current-and-constant price valuation which, clearly, had not been set out in the

¹⁴C. A. Bochove and H. K. Van Tuinen, "Flexibility in the Next SNA: The Case for an Institutional Core," *Review of Income and Wealth*, 32(2), 1986.

¹⁵Nancy Ruggles, "Comment" on papers on the structure of the SNA, *Review of Income and Wealth*, 32(2), 1986.

contemporary formulation of the 1968 SNA.¹⁶ This broader conceptual approach meant that, at the very least, the existing 1968 framework would need to be expanded. It required that previously ignored elements such as the current consumption of government capital (fixed assets and especially official buildings), public fixed capital formation, including certain current defense outlays, national monuments and changes in wealth holdings and valuables, should all be taken into consideration in assessments of economic value.

5. THE ROUTE CHOSEN

The latter group won the debate for comprehensive inclusion, arguing it was necessary to set a proper “gold standard” to serve as the correct conceptual and reference for national accounting. The desire to have a readily available structure defining the binding logic of all economic interrelationships occurring within an expanded notion of the boundary of production was clearly important and shared by many analysts. A sound theoretical framework, it was believed, would provide a better guide for national accounts compilers facing tricky issues of deciding where to allocate raw data and how to determine relevant imputations. The new SNA set out to make the crucial separation of value changes (price effects) from other volume changes and to ensure the relevant matching of beginning and end-period asset values with their corresponding economic flows over a defined accounting period. In this respect, the revised 1993 SNA was indeed commendably coherent. Nevertheless, as recent contributions by Utz-Peter Reich and Gyorgy Szilagyí have well demonstrated, the full concession to theory remains incomplete.¹⁷ In particular, the accounts do not adequately incorporate a (marginal) theory of value and this, in a way, restricts their usefulness for microeconomic analysis. The absence of such a theory has also adversely affected how micro data should be defined, collected and compiled into meaningful economic policy variables in the macro system. Significantly, in the government sector where the primary concern is with producing non-market goods and services for the benefit of society overall, the attention paid by the classical economists to the crucial distinction between “value in use” and “value in exchange” seems to have been accorded little importance.¹⁸

¹⁶UNSO, *National Accounts at Constant Prices*.

¹⁷Utz-Peter Reich, “*National Accounts and Economic Values—A Study in Concepts*” and Gyorgy Szilagyí, “*What is the Theory Behind*” (a review of Reich’s book) in *The Review of Income and Wealth*, 49(2), June 2003.

¹⁸Setting aside the understandable desire to achieve full harmonization and consistency between stocks and flows in the system, the pragmatic case for the implementation of accrual accounting in government has yet to be made let alone proved. Analysts might be prepared to accept accrual accounting if, for example, the Dutch government were to estimate the capital consumption of the dykes and dams that protect the very integrity of “The Netherlands.” They should only believe in its relevance if and when the Dutch authorities also decided to apply such estimates in an operational policy context. Similarly, if the UK was ever to contemplate selling off Buckingham Palace as a hotel, as some extremist republicans have suggested, or the U.S. was to offer The White House to the market, then the valuation and depreciation of government buildings and monuments—the transition from value in use (where there is no market) to value in exchange—would make sense and serve a useful purpose. In the meantime, given the enormous variety and functions of government properties and monuments and the absence of clear principles whereby calculations of capital consumption should be appropriately made in specific cases, the conduct of such an exercise would necessarily be selective and subjective. Worse than irrelevant, adding to the apparent national “cost” of government—even if interpreted conceptually as value added—would play directly into the hands of critics who want nothing more than to see the role of government in the economy significantly diminished, despite its unique contribution to general well-being.

The 1993 revision developed further the separate institutional sectoring (by households, non-profit institutions, government, etc.) introduced into the previous 1968 SNA. Separating non-profit institutions from households was especially important for the developing countries. Much of the non-market output of the health and education sectors and many community services are significantly supplied by non-profit organizations, especially religious and charitable institutions. Even in the developed world, the downsizing of many government operations in the area of care for the aged, support provisions for the disabled, etc. has resulted in these activities being passed over to non-government agencies.

The whole 1993 system introduces an integrated “stock-flow” framework that is no longer concerned exclusively with current flows and transactions between transactors in the economy. The 1993 structure allows for all transactions taking place within a given accounting period to be related appropriately to a comprehensive set of opening and closing balance sheets as in any other operating enterprise engaged in economic activities. The balance sheets thus record for the whole economy the value of the financial and non-financial assets and liabilities position of every sector at the end (or beginning) of each accounting period. Since the basis of the system is current market prices, such balance sheets are affected by whatever quality changes and price (valuation) differences, as well as timing questions, occur over a particular accounting period. This matters especially in times when countries are undergoing rapid inflation, as many had done in the 1970s and 1980s. Further adjustments must then be made to take into account relevant timing, “volume” and “price” changes and to differentiate between these when recording movements in values.

In pointing out the need for much greater precision in accounting for all these changes if the underlying economic realities were to be captured, the ISWGNA drew on recent developments in index number theory to move statistical practice closer to economic concepts. It took into account related thinking about measuring changes in the cost of living and assessing the impact of technology on real productivity. Chapter XVI in the 1993 SNA dealing with price and volume measures is strongly influenced by the well known writings of Erwin Diewert and Jack Triplett on these issues. It also reflects the longstanding interest of Peter Hill, one of the primary authors, not only in price indices, but also output and productivity measurement, and Anne Harrison’s work on hyper-inflation.

One of the main improvements made in the 1993 SNA related to the extension of the production boundary. The specific individual (or household) use, as opposed to collective use, of government services was separately distinguished. This distinction between “who uses” versus “who pays” for government and non-profit output, introduced earlier in the ICP, is essential to a proper understanding of the relative importance of non-market goods and services to household well-being and the role of government in providing social and communal support. A more precise definition of financial services, and a broader and more consistent perspective of the composition of gross fixed capital formation are also introduced. All these adjustments have an impact on marginally extending the coverage of GDP and result in some changes to the relative magnitudes of various aggregates and their respective sectors. The new expanded notion of GNP is appropriately redefined as Gross National Income (GNI).

In the revision process, the 1993 SNA became more of a basic text on national accounting than a manual. In its attempt to cover all aspects of economic activity in a comprehensive, all purpose accounting system encompassing both stocks and flows, it has placed less emphasis on the essential pragmatic aspects of data collection. As a means of reference, the 1993 SNA can be seen, quite rightly, as central to the coincidence of a fundamental conceptual perspective about economic activity (and its observed dynamics) as it is aligned with the basic precepts of economic theory. But, as a guide to data compilation and as a practical operational policy tool for government, it still leaves something to be desired. This is because the primary objective was to fully integrate all areas of economic activity into the system, including those that extend beyond the normal bounds of official interest and policy relevance.

The 1993 revision process, nevertheless, took into account developments in information technology and the importance of micro level data and micro-macro linkages. These had been long advocated by Richard and Nancy Ruggles and their daughter Patricia. It endorsed the use of micro-simulation procedures both for building up a comprehensive view of economic behavior and in facilitating and enhancing data compilation and aggregation procedures.¹⁹ The revision process recognized that, in monitoring “progress,” the new system had to embrace economic activities that although hidden, under-recorded or unrecognized (especially in the case of women’s work in the household) clearly contributed to enhancing human welfare. The 1993 SNA, nevertheless, still failed to acknowledge that economic activities and transactions conventionally regarded as “profitable” at a personal and individual level might not necessarily be simultaneously to the greater good of the local community or society at large. Neither might such activities necessarily prove advantageous to the environment over the longer term in a way that traditional economic theory perhaps suggested. Despite the efforts to bring measured values more in line with utility, this again underlines the recognized problem of equating GNI with welfare and societal well-being.

6. CHANGES IN THE SOCIOECONOMIC CONTEXT OF THE REVISION

Between 1968 and 1993, there were significant shifts in policy emphasis. Outside the immediate realm of statistical development, many quite fundamental structural changes took place in economic thinking and in the global environment itself. Major political events secured front stage and new ideologies emerged and older ones were given a fresh coat of paint. Some of these changes exerted an influence on conventional data constructions and statistical priorities but, for the most part, except for the fundamental transformation of the former Soviet Union, the basic statistical system for recording national economic activity remained unchanged. Other factors such as the increased economic flexibility of consumer markets and employment contracts, the weaker, and more diffuse nature of labor bargaining power, and the decontrol of capital transfers, all helped contribute to a freer and more open economic system. Globalization, both corporate and political, strengthened this process, although perhaps more in factor rather than

¹⁹ *UN National Accounts Statistics Compilation Manual*, UN Statistics Division, New York, 1998.

product markets. The reduction in the direct role of the government and a diminished economic importance and dominance of the state that accompanied the drive for the increased privatization of production and liberalization of markets formed the basis of the new ideology. Together with the fundamental structural changes wrought in the transition states this contributed to both a new international order and a new market volatility. Such changes in political philosophy proved difficult to identify and were not easily captured in traditional national statistical frameworks. The system also failed to give early warning signs of imminent crisis that were mostly financially inspired. Other recognized problems that have coincided with a reduced role for a downsized government sector, such as the selective and more discriminatory provision of health services, have not been readily picked up in official data.

Significantly, this movement towards entrusting the machinery of economic progress to the hands of free enterprise, which formed the basis of the so-called “Washington Consensus” and the political push to downsize government, placed less emphasis on the need for national accounts. It focused on fiscal discipline and balancing the books in the government, it supported supply side tax reform (cuts) and it advocated a stricter and more prudent direction of public infrastructure development. The tenets of market fundamentalism demanded private tests of the viability of public investment proposals. Monetary policy assumed pre-eminence and some central bank views became almost indistinguishable from those voiced by investment bankers and stockbrokers. Inflation figures and interest rates became the markers of real progress and traditional national accounts indicators merged into the grey background and shadows. Real economic measures have only just begun to reappear because the stimulation of demand by whatever means lie at government’s disposal (to achieve growth) has once more become a major policy objective.

The 1968 SNA had been, undoubtedly, a landmark data structure and a true forerunner to the 1993 system. Despite the core importance of the innovative and path-breaking methodological approach it brought to bear on all dynamic issues of broader socio-economic concern, it was essentially a stand-alone national statistical construct. It was criticized by some policy analysts for being a closed economic model of unreconstructed Keynesian thinking. Since it essentially reflected a fixed technology model of economic behavior, some even argued that the SNA underpinned a Marxist materialist interpretation of history. Whether the observed economic and technical relationships were considered “optimal” (or in “equilibrium”) or not, the system was still essentially “descriptive.” It implicitly “accepted” as given, the observed institutional factor relations in production. The existing institutional structure relating capital to labor could thus be taken as being, in some sense, officially “endorsed” by the data although it represented the basic core parameter that policy prescriptions were designed to alter.

In the international scheme of things, the 1968 SNA made some provision to account for the “rest of the world” but primarily as an adjunct to the central operations of the domestic economy. External transactions were defined to take place between resident and non-resident entities at prevailing fixed official exchange rates. This seemed acceptable at a time when global corporate operations were less important and the system assumed the general homogeneity of prices.

But, by 1973, the Bretton Woods fixed exchange rate mechanism had effectively broken down and was simultaneously abandoned by the IMF and most major trading countries. Apart from the different pattern of international capital flows such changes in exchange rate regimes brought about, the oil crisis contributed to unexpected fluctuations in international commodity markets and energy prices. These helped fuel inflation in a number of advanced industrial countries and gave rise to a renewed emphasis on monetary policy and supply side economics.

7. CONCLUDING OBSERVATIONS

Launched towards the end of what was to become only the first of a sequence of UN “Development Decades,” the 1968 SNA reflected the almost unanimous view that a high economic growth rate was the secret to the achievement of social progress. By 1993, and thus at the beginning of the fourth Development Decade, and against a background where there is an absence of any noteworthy success in reducing international poverty, the new SNA has done little to change this core perspective of policy. Successive UN “State of the World Economy” reports have progressively raised the required growth rates for overall national progress from 5 percent p.a. in 1960–69 to 6 percent in 1970–79, and then up again from 7 percent in 1980–89 to a 10 percent growth in global industrial production for the 1990–99 period to achieve the declared goal of development progress. The revisions in the SNA could record all this while retaining an emphasis still on production, or rather on the income generated by production, without indicating the extent to which the world had changed or development been achieved. The question remains: Do the accounts properly track transformation and progress, or—even more narrowly—economic progress? Is economic growth still the main goal to be set in laying out objectives for a “Development Decade”? As long as (formal) economic production adds more to those with incomes above the mode or median, progress will appear dramatic and successful when the real problems of development may be left untouched with few significant inroads made in global poverty reduction.

A major contribution of the SNA was to recognize that, in an increasingly complex economic system, firms (and hence industries) could no longer be clearly categorized by a single “principal product” and thus the previously assumed “one-to-one” relationship between commodities and enterprises (even establishments) was no longer tenable. The distinction between the different transactions undertaken by various types of transactors was an important contribution to a clearer understanding of economic relationships, but the implicit “weighting” given within a market system to large monetary transactions still begs the question of how the national accounts can be used in a domestic and international policy context to resolve the major development problems being faced by the world’s poor and thereby help reduce global poverty.

Equally important, the explicit adoption of a conceptual framework that implicitly assumes an open economic system sees little need to apply separate valuation principles for the parallel provision of non-market alongside market

goods and services. This poses theoretical questions that demand renewed attention. Public and private goods do not belong to a seamless interactive system.²⁰

From a practical point of view, the additional elaborations formulated in SNA 93 seem to have served only a minimal operational policy purpose. Moreover, the compilations introduced into the overall valuation process have served primarily to confuse and frustrate many developing country statisticians and analysts, rather than help illuminate patterns of growth and structural change—particularly as between the private and public sectors of the economy and their respective size. Such is the powerful influence of the SNA that there is a danger users will accept what are essentially technical and methodological decisions as defining and pre-determining what is right in principle. It is to be hoped that the next SNA review will look closely into some of these issues and come up with a solution (for all countries) that will satisfy Nancy and Richard Ruggles' desire for "a useful and workable national accounting system."

²⁰The institutional sectoring in the SNA, elaborated in SNA93, is essential because the incentive structures and behavioral responses to systemic forces in the specific contexts of such institutions, their objectives and requirements, are very dissimilar.