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A NOTE ON THE REVISION OF THE UNITED NATIONS SYSTEM OF NATIONAL ACCOUNTS

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THE CURRENT SNA REVISION AND ITS MAJOR CHANGES

The present revision of the United Nations System of National Accounts began in 1975 as an updating, clarification, and harmonization of the 1968 SNA with other international statistical systems. The revision process has been more lengthy than expected, and is not scheduled for completion until 1993. Although it is difficult to evaluate something that does not as yet exist, useful proposals have been made for major changes in several areas. However, there is also some evidence that the proposed revision may also perpetuate or even exacerbate some of the more serious inadequacies of the present SNA.

On the positive side, the articulation of full sets of income and outlay accounts, capital finance transactions, revaluations, and balance sheets represents a major improvement. Although the framers of the previous SNA system had envisaged such accounts, they were incomplete for some sectors and many of the more detailed questions were not resolved. In particular, the question of consistency with the data collected by other international agencies has been actively pursued by the revisers of the SNA.

Secondly, the expansion of the definition of capital formation to include research and development, mineral exploration, computer software, and possibly other intellectual property is a useful innovation. Such an expansion in capital from purely a "material product" definition is appropriate now that centrally planned countries are adopting the more utility oriented concepts of production that recognize services as part of final output.

Finally, there is a proposal to distinguish between consumption and consumption expenditures, and also between individual and collective consumption. The distinction between consumption and consumption expenditures by households is important for analyzing household behavior, and for evaluating the welfare of households based on their total consumption. International comparisons of living standards and the assessment of real consumption and poverty within countries require including not only those goods and services individually consumed by households, but also those collective goods and services provided by governments and other organizations.

On the other hand, the SNA revision—or its lack of revision—raises serious questions about its adequacy as an analytic framework. In particular, five problem

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areas can be distinguished that are not, in my view, adequately treated in the proposed revision. These areas are (1) sectoring, (2) owner-occupied housing, (3) household capital formation, (4) pensions and insurance and (5) interest.

Sectoring of the Economy

In the present SNA, the institutional sectoring consists of (1) corporate and quasi-corporate enterprises, (2) general government, (3) non-profit institutions serving households, (4) unincorporated enterprises and households and (5) *de facto* the rest of the world. For the revised SNA, it is proposed that non-profit institutions serving households be eliminated as a major sector and be included as a part of the household sector—thus reducing the number of major sectors by one.

Since, in general, national statistical offices have not implemented the SNA recommendation for treating non-profit institutions as a separate sector of the economy, it is quite reasonable that such sectoring be abandoned. The preference of many national accountants for including non-profit institutions in the household sector has been primarily based on the lack of adequate data. The estimates of final consumption for households have usually been derived residually, and often still are. Reliable data on the final consumption of non-profit institutions have often not been available, so it has been impossible to separate them from household final consumption. Since households were considered as the consumers of the goods and services provided by non-profit institutions, the most appropriate solution has been not to distinguish separately such goods and services.

However, the current SNA proposal for creating a combined household and non-profit institution sector needs to be reexamined in light of the other proposed revisions of the SNA and the changed importance of non-profit institutions themselves. As already noted, the distinction between consumption expenditures by households and their consumption of goods and services is made in the revised SNA. There is also an attempt to provide better integration between the macro and micro data for households. Both of these changes require a separation of the transactions made by households from those made by non-profit institutions.

Furthermore, non-profit institutions in many countries now represent a significant part of the economy. In the United States non-profit institutions account for approximately 7 percent of the total employment. They consist of schools, universities, hospitals, and associations, as well as religious and charitable organizations. They cover a broad variety of research, educational, health, recreational and other activities, and exist along with profit-making organizations and public enterprises engaged in the same activities.

Combining households and non-profit institution transactions within the household sector runs counter to the spirit of the transactor/transaction approach that is being emphasized in the SNA revision. The income and outlay accounts, capital finance accounts, and balance sheets for a combined household/non-profit sector would have little analytic meaning or use. The combined account could not be partitioned into size distributions or be used as control totals for microdata. Since the revised SNA requires a complete sub-sectoring of non-profit institution transactions, a preferable solution is to classify non-profit institutions with other similar profit-making or public enterprises. Thus, they would be a part of a comprehensive enterprise sector that would cover all private and public enterprises irrespective of their legal form of organization.

The household sector accounts would then represent households, in their role as income recipients and consumers. The enterprise sector would represent all enterprises engaged in either profit or non-profit activities.

A comprehensive enterprise sector is also needed because the existing SNA distinction between quasi-corporate enterprises included the corporate sector and unincorporated enterprises included in the household sector is difficult to make. The stated criterion is that in order for an enterprise unit to be included with corporate enterprises as a quasi-corporate enterprise, it should have a complete set of accounts. In contrast, it is argued where the accounts of unincorporated enterprises are not distinguished from household accounts, these enterprises should be relegated to the household sector.

Although conceptually this approach appears reasonable, it cannot easily be applied on a case by case basis. For farming, for example, it would be more reasonable to treat all farms that sell farm produce as being in the same sector, rather than including some in the enterprise sector and relegating others to the household sector. If distinctions are to be made, farms might be classified by size and type of farm within the enterprise sector rather than relegating different farms to separate major sectors on the basis of subjective accounting criteria.

One of the anomalies in the revision of the SNA sectoring is that although categories are established for the "collective and individual consumption" provided by general government and by non-profit institutions, no such categories exist for enterprises. Certainly, enterprises do provide their employees with health care, day care services, and other fringe benefits. If the goods and services in kind that are provided to individuals by enterprises are to be distinguished from consumer expenditures made by individuals, these categories of outlays will need to exist.

Owner-occupied Housing

Both the existing SNA and the proposed revision treat owner-occupied housing differently from other components of consumption expenditures. Households as occupants are considered to be renting their dwellings from themselves as real estate owners. Their activities as owners are considered to be those of unincorporated enterprises. These fictitious unincorporated enterprises own the dwellings and pay all the costs associated with them. To offset these outlays, the unincorporated enterprises receive an imputed space rental from the households as occupiers. The difference between the space rental and the current costs of providing the housing services is returned to households as imputed rental income.

The SNA household income and outlay account thus includes (1) on the outlay side, imputed space rental as a part of consumption expenditure and (2) on the income side, imputed rental income on owner-occupied housing as a part of total rental income. The actual costs of owner-occupancy, including maintenance expenditures, property taxes, insurance, mortgage interest, imputed interest on the owner's equity and capital consumption appears in the SNA as outlays and gross saving by the fictitious unincorporated enterprise.

Although this method of imputation does include the services of owner-occupied housing into both output and final consumption, it does so by distorting the accounts of both households and unincorporated enterprises. In fact it is households that pay property taxes, interest on the mortgage debt, and expenses of repair and upkeep, not unincorporated businesses in the real estate industry, and it is households that do the gross saving reflected in depreciation charges.

For measuring both the total housing consumption of individual households and to provide comparability between owned and rented housing, it is recognized that some type of imputation for the use of owner-occupied housing would be desirable. Such an imputation can, however, be made in the household account both as both income and consumption without the necessity of running all the related transactions through a fictitious unincorporated enterprise. By following the transactor/transaction approach, the current costs of owner-occupied housing would be listed as actual expenditures by households. A separate imputation could then be made for the difference between such costs and the space rental value of the owner-occupied housing.

Household Capital Formation

Although the framers of the revised SNA are very much concerned with expanding the definition of enterprise and government capital formation to include research and development, computer software and even intellectual property, they are strangely silent about household capital formation. Since owner-occupied housing is treated as being owned and operated by unincorporated enterprises, it is included in capital formation, but other purchases of durable goods by households are treated purely as a category of current expenditures.

It is somewhat paradoxical that if the purchase prices of new houses include the cost of the major kitchen and other appliances, these will automatically be included in capital formation. Hosever, if these appliances are bought separately by households, they are treated as current expenditures. Similarly, automobiles if bought by enterprises are classified as capital formation, but when bought by households are considered to be current expenditures.

Much of the consumer credit extended to households relates to the purchase of automobiles and other consumer durables. Both households and financial institutions recognize that such purchases do not represent merely consumption in the current period, but that the good purchased continues to have value and provide services over a period of years. It is time that consumer durables are recognized in the SNA as capital formation, and, as in owner-occupied housing appropriate imputations for the services that they provide should be introduced into the accounts so total consumption can be more accurately measured.

Pensions and Insurance

Although the revisers of the SNA propose reform in the treatment of casualty insurance to bring it in line with the European System of Accounts, there has been no mention of altering the treatment of pensions and other insurance. The present SNA treats employers' contributions to life insurance, private pension, and welfare funds as part of current compensation received by employees, and therefore as part of household income. Only that portion of the contribution which represents the costs of operating the insurance companies and pension funds—called the service charge—is treated as personal consumption expenditures.

The full increase in the reserves held by insurance companies and pension funds, therefore, is attributed to personal saving. Households are thus considered to own the reserves of the insurance companies and pension funds. The net equity of these funds appears on the household sector balance sheet, and interest earned on the reserves is attributed as current income to households, although of course they do not receive it.

As a corollary to this treatment in the SNA, pension benefits and life insurance annuities actually paid to households do not appear as part of household income because such treatment would involve double counting. It would be included as income initially when the employers' contribution is paid to the insurance company or pension fund and subsequently when the benefit is paid to the household. As a consequence, the receipt of such benefits are considered to represent only a change in the form of the assets held by the household, from net equity in life insurance and pension funds to cash.

Compilers of household survey microdata usually reverse this treatment. Pension and annuity benefit payments received by households are included in household income and employer's payments of contributions to pension funds and insurance are not. Interest on pension and insurance reserves is not attributed to the household, and the household balance sheet does not include equity in employer-financed pension and insurance reserves.

In the United Nations guidelines on income distribution statistics, the household survey treatment of pensions and insurance is recommended rather than that of the SNA. (See United Nations Statistical Office, Series M, No. 61, Provisional Guidelines on Statistics of the Distribution of Income, Consumption, and Accumulation of Households, 1977.) Where the focus is on the distribution on income, it is clearly undesirable to treat pensioners as having zero income—that would not contribute much to an understanding of the position of the aged in the economy. Conversely, entitlement of younger persons to benefits that will become available only on retirement or death are substantively different from cash income received in the present period. Furthermore, employers' contributions for insurance and pensions are a poor and unstable measure even of the present value of those future rights.

By modifying the current SNA treatment of pensions and insurance, it is possible to adhere more closely to the transactor/transaction principle and provide better integration with microdata concepts. Employers' contributions to pension and insurance funds should be treated as funds held in escrow for future payment. Pension benefits should be considered as income when they are paid out to individuals.

Interest

The present SNA treats interest not as a payment for a service, but rather as a transfer of factor income. This exclusion of interest received by financial institutions for services rendered has had an unfortunate impact upon their value added. Computed in the ordinary way as the difference between operating receipts and intermediate costs, value added of financial institutions would be very low or negative. Operating receipts would consist only of actual service charges imposed on depositors and other users of banking services and would not include the receipts of interest that are the major source of banking income.

It is argued, however, that service charges do not cover all of the services provided by these institutions. There is also an implicit exchange between the banks and their customers in which the banks provide services in return for the use of the customers' money to earn interest. The value attributed to the services provided is set equal to the difference between the interest received and the interest paid out, and this attributed amount is added to actual service charges to obtain total banking service charges.

Such a treatment has been particularly unsatisfactory for those countries which have large international payments and receipts of interest. As a consequence, the revised SNA will change the imputed service charge for financial intermediation (previously bank output) to distinguish between those services which constitute intermediate consumption and those that constitute final demand. The exact methodology by which import charges for services of financial intermediaries will be calculated has yet to be agreed as indeed has the process of dividing the charges within the domestic economy.

Many different alternatives have been proposed for the treatment of interest, but the simplest and most straightforward approach would be to treat interest not as a transfer, but rather as a purchase of a financial service. This would accord more closely with the view of commercial borrowers who regard interest on funds that they borrow for business purposes as part of their costs. It would also accord with the view of individual households who consider the interest costs of installment and other consumer credit as part of the purchase price of such items as automobiles and consumer durables.

THE OVERALL DESIGN OF THE REVISED SNA

Finally, in evaluating the overall design of the revised SNA two questions need to be examined. First, does the proposed revision of the SNA provide a simple and understandable overview of the economic system? Secondly is the revised SNA a suitable framework for integrating the data required for the wide spectrum of policy and analytic uses that can be anticipated in the next decade?

The proposed revision of the SNA presents an elaborate and complex set of interlinked cascading accounts that have been developed for each institutional sector showing: (1) production, (2) generation of income, (3) appropriation of primary income, (4) entrepreneurial income, (5) appropriation of other primary income, (6) secondary distribution of income, (7) redistribution of income in kind, (8) use of disposable income account, (9) use of adjusted disposable income, (10) capital transactions, (11) financial transactions, (12) other changes in assets, (13) revaluations, (14) neutral revaluations, (15) real holding gains/losses, (16) opening balance sheet, (17) changes in balance sheet and (18) closing balance sheet. As noted in the proposed revision, these set of accounts are designed to answer "Who does What by means of What for what purpose with Whom in exchange for What with What Changes in stocks?"

Given this level of complexity, there is a distinct danger that when the revised SNA is actually put in place, it, like the Hubble telescope, may not be successful in bringing into focus a clear view of what it was designed to examine. Only professional national accountants will be able to fathom the national accounts. Furthermore, the establishment of such an elaborate system as the standard to be adopted by national and international statistical offices may result in the SNA becoming a statistical behemoth independent of its creators and with an illogic of its own—not unlike a Frankenstein monster.

One of the major virtues of national accounting systems used by many countries is that they do provide a relatively simple macroeconomic overview of the economic system. There is a considerable danger that in elaborating the SNA this important function will be lost. Serious reconsideration should be given to implementing the proposal made by the Netherlands Statistical Office for a simpler set of "core" accounts. These accounts would record the actual transactions of the major transactors in the economy that underlie the larger and more elaborate set of SNA accounts.

With respect to the question whether the SNA will provide an adequate framework for the wide spectrum of analytic uses for data about the economy, it should be recognized that the SNA is both conceptually and statistically a set of aggregate accounts designed to be presented as tabulations. In a sense the SNA is a prisoner of the printed page and punch card mentality; it reflects both data needs and data technology characteristic of the past 50 years. The SNA proposed revision has not been designed to take advantage of the recent developments and anticipated future changes in both data needs and data technology.

Considering the present analytic needs for detailed information about the economic system and the capabilities of modern computers, the national accounts should be constructed in a manner capable of integrating and accessing microdata bases derived from administrative sources and large samples. If the national accounts cannot provide efficient access to such detailed data, both business and governments will increasingly come to depend on private proprietary data bases, and the advantages of an overall integrated system will be lost.

However, if a set of core accounts are used to record the transactions of enterprises, governments and households in the national accounts, these accounts could be directly related to a wide variety of microdata bases referring to such entities and their transactions. Harmonization of concepts used for the national accounts and microdata sources would be required, and the familiar problems of data reconciliation would need to be resolved. However, it is absurd to believe that these problems are insurmountable in a world where computers put through telephone calls almost instantaneously, airline reservations can be made in a few seconds, and credit cards are checked in a matter of minutes.

The revised SNA should be built around the task of integrating macro aggregates with the underlying microdata. From an analytic point of view such integration is essential if computational techniques such as microsimulation modeling utilizing longitudinal data are to be related to macroeconomic analysis.