Further Thoughts on Recent Development of SNA

1. Convergence of National Systems to the Revised SNA

An exciting methodological breakthrough has been made by the publication and dissemination of the United Nations’ revised SNA in the past decade. On the publication of the revised
SNA, national systems of national accounts in most industrialized countries have gradually converged. Indeed, the Japanese system of national accounts has recently been completely reformed and adapted itself to the revised SNA. To our knowledge, it is widely acclaimed, both nationally and internationally, that the Japanese system of national accounts is the only system in the world which supplies necessary information on economic aggregates and their sector breakdown based upon the revised SNA. International dissemination of the revised SNA becomes also apparent if we look at the following tables, (Tables 1-3), which are taken from the United Nations document (E/CN. 3/507). The tables are prepared on the basis of the responses of national statistical agencies to the SNA national accounts questionnaire for the publication of Yearbook of National Accounts Statistics. The tables are omitted in this article for saving the space. The general impression received from the inspection of the tables is that the idea of the revised SNA has steadily pervaded not only the developed countries but also the developing countries. However, we must note that some countries might adjust their national accounts statistics in conformity with the SNA framework and concepts, others might not make such adjustments and might limit the supply of information to what is available in the form required for the questionnaire. Having in mind the developments, the state of the dissemination of SNA, I shall give a few comments on the points at issue in SNA in the section that follows.

2. The Implementation of the Revised SNA

2.1. Sectoring and accounting structure

The kind-of-activity breakdown appears most frequently as a separate table, not articulated into the sector accounting system; production accounts are often shown either only in the form of consolidated accounts for the nation as a whole or on the institutional sectoring basis.

In this connection, it is interesting to note that the Japanese system presents the kind-of-activity production accounts, whose structure is indicated below:

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<thead>
<tr>
<th>Input</th>
<th>Output</th>
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<tbody>
<tr>
<td>Intermediate Inputs</td>
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<tr>
<td>Compensation of Employees</td>
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<tr>
<td>Operating Surplus</td>
<td>Output</td>
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<tr>
<td>Capital Consumption Allowances</td>
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<tr>
<td>Net Indirect Taxes</td>
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Producers of Government Services

<table>
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<tr>
<th>Input</th>
<th>Output</th>
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<tbody>
<tr>
<td>Intermediate Inputs</td>
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<tr>
<td>Compensation of Employees</td>
<td>Output</td>
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<tr>
<td>Capital Consumption Allowances</td>
<td></td>
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<tr>
<td>Net Indirect Taxes</td>
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Producers of Non-profit Private Services

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<thead>
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<th>Input</th>
<th>Output</th>
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<tr>
<td>Intermediate Inputs</td>
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<tr>
<td>Compensation of Employees</td>
<td>Output</td>
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<tr>
<td>Capital Consumption Allowances</td>
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<tr>
<td>Net Indirect Taxes</td>
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(Notes) 1. Intermediate Inputs of Industries are derived from $U$-matrix. The $U$-matrix of each year is estimated from a bench-mark input-output table.
2. Output of Industries is derived from annually constructed $V$-matrix.
3. Output of Producers of Government Services is classified according to Purposes of Government Services.

Some comments deserve to be noted on national experiences in Canada and Britain.

**Canadian accounts.** In the accounts the production account is shown only in the form of a consolidated account for the nation as a whole. Only the income and outlay and capital finance accounts are deconsolidated by sectors; The sectors used are essentially the institutional sectors of the revised SNA except that non-profit institutions are not shown separately.

Non-profit institutions are treated as an independent sector of institutional sectors in Japanese system.

Since they do not break the production account down at all, the Canadian accounts do not need the commodity/other goods and services break of the industry/other producers break and this classification is not used in the input-output tables.

Note that $U$ and $V$ matrices in Japanese system refer to the commodity type of goods and services only.

**The case of the United Kingdom.** In terms of extension of the accounts, there is interest in further subsectoring, especially of the household sector by social and demographic characteristics. The development of estimates or wealth and its distribution is considered to be an important aspect of this. Geographic distributions are of increasing interest. Finally, there are a number of questions relating to valuation in which there is interest, both from the point of view of international comparisons and the point of view of intertemporal comparisons. In connexion with the latter, the implications of the various forms of inflation accounting are being explored.

Questions, then, might be raised on sectoring by social and demographic characteristics; sector balance-sheets constructed in the estimates of wealth and its composition; and design of inflation accounting.

### 2.2. The related forms of accounts

**Input-output information.** Input-output data are regarded as extremely important for bench-mark purposes but not as something to be compiled as frequently as the national accounts. It is interesting to note that even in EEC, in which most countries have well-developed national accounts, it has not yet been found feasible to implement EEC's requirement for simplified annual input-output tables.

In this place, it is particularly useful to see that in Japanese system a simplified annual estimate of input-output tables is made by the following processes:

(i) annual estimates of $V$-matrix

$V$-matrix is compiled for a bench-mark year using official input-output tables for the year.

In the intervening years between two bench-mark years, $V$-matrix is estimated according to 3 different categories of industries:

1) non-manufacturing sector. The characteristic product of component industries predominates over their output.

2) manufacturing sector. The component industries produce sufficient amounts of subsidiary products.

3) own-production sector. The component industries produce substantial amounts of
product for their own use.

(ii) Annual estimates of U-matrix

U-matrix is derived from the following procedures.

Let X be a use matrix of intermediate products by commodity × commodity. By definition,

$$A = Xq^{-1}.$$  

But, $B = AC$, assuming

$$X' = Cq.$$  

And, $B$ is derived.

Then, knowing $B$

$$U = Bq.$$  

The derivation essentially rests on the assumption of commodity technology. X is compiled from official input-output tables. Being X is not available in the intervening years between two benchmark years, simplified estimates of U-matrix is made by the extrapolation:

$$b(t) = Cq(t)(p(t)q(t)/\sum p(t)q(t))$$

where,

- $b(t)$, i commodity composition of intermediate inputs in the year t,
- $p(t)$, price of item k of i commodity in the year t,
- $Cq(t)$, corrected composition of item k in the year t.

**Balance-sheets and revaluation accounts.** The impact of world-wide inflation is particularly felt in the new field of inflation accounting; in this context a need is frequently expressed for further study of the methodology of compiling sector balance-sheets and for a reconsideration of the analytic consequences of the SNA recommendations relating revaluation.

It is essential for the development of the inflation accounting that the design of inflation and their incidence on sectors and the methodology of compiling sector balance-sheets and reconciliation accounts be laid down.

**Public sector accounts.** On the one hand, there is much concern over the problems of reconciling the SNA approach to the public sector with that taken in the International Monetary Fund draft "Manual on government finance statistics". On the other hand, quite apart from the question of reconciliation of the SNA and IMF accounts, questions have also arisen having to do with the role of the public sector in the core SNA accounts, including such matters as compatibility of sector definitions and the appropriate level of consolidation.

By and large, definition of the producers of government services and the general government in Japanese system follows SNA's definition. It appears that the definition of the public sector essentially depends upon the role of the public sector as I have made a point (Kurabayashi [2], ch. 4).

**Balance of payments data.** The version of the IMF Balance of Payments Manual with which the revised SNA was reconciled has been superseded and the present version differs from SNA in many particulars. It is desired that total reconciliation of the rest of the world accounts of SNA with IMF's balance of payments data will be accomplished.

**Social and demographic information.** The increasing availability of micro data and the increasing ability of countries to utilize them effectively will inevitably have an impact upon all types of distributional data, which until now have been poorly integrated with the national accounts.

As a recent development, it should be recalled that the Bureau of Statistics of the Japanese Government has recently shown a great interest in the uses of micro data set. The Bureau now considers the integration of social and economic statistics in the level of micro data.
2.3. Other extensions of the accounts

Non-market flows. There are conflicting demand, on the one hand, to include more imputations for non-market activities and on the other, to keep market transactions undilated. A consensus seems to be emerging that the solution lies in showing the market and non-market flows separately; however, a good deal of further study is needed to work out the implications of this conclusion both for the accounts and for basic data collection.

A question immediately follows. How separate market and non-market flows are fitted into the accounting structure of SNA?

Energy and the environment. It is true that the wider environmental questions are less simple and would require much further work before any decisions could be reached. This is an area in which, dispute the interest in the topic, there is much resistance to including any measure of the use of environmental resources in the accounts at cost of unpairing their usefulness for other purposes.

To my judgement at the present moment, the inclusion of any measure of the use of environmental resources in the accounting structure of SNA seems to be still premature.

2.4. Classifications, definitions and information content

The expert group on welfare measures to supplement the national accounts and balances, which met in March 1976, concluded that any attempt to alter the existing accounts to take account of these concerns would be premature, in that it would endanger their usefulness for meeting demonstrated needs without any assurance that it would be possible to meet the newly perceived needs satisfactorily. Nevertheless, these concerns do remain of pressing importance and some way of dealing with them is worth exploring.

One of the point made in the Saunders report (E/CN. 3/477) is the usefulness of the concept of the total consumption of the population. The concept would serve for a welfare measure to supplement national accounts aggregates without substantially altering the conceptual framework of SNA.

The difference in sectoring and accounting structure also have other consequences for the information content of national systems. It is nevertheless clear that the natural unit for compiling data on production is the establishment and the natural unit for compiling data on saving and investment transactions and on the distribution of property income is the enterprise. This is a problem with which national accountants have long struggled; the effort to find a better solution to it is important.

It should be noted that the dichotomy between industrial and institutional sectoring is essential for the accounting structure of SNA. Japanese system exactly follows this principle.

One aspect of the information content of national accounting systems which reflect both classifications and accounting structure has to do with the ease of consolidation. At the same time, the consolidation should be possible to perform more easily from an aggregate level of consolidation to the much greater level of detail called for in SNA; what appears to be needed is the specification of uniform principles of consolidation, simple in operation than the Blue Book’s.

Some appropriate definitions are required for the design and specification of an intermediate set of accounts.

Development of accounts at such an intermediate level would have a further consequence, which is reflected in the publications of some countries. The double-entry accounting structure can then be limited those relationships in which articulation is significant, that is, to those flows in which it is important to know what the to-whom, from-whom relationships are. Consolidation based on this principle would involve not only a hierarchical interrelationship of sectors.
but also a grouping of the flows within accounts to eliminate unneeded detail.

In this regard, it should be pointed out that the usefulness of the screen (dummy) accounts would be looked at for the purpose of developing the accounts at an intermediate level.

REFERENCES


**[報告]**

新SNAの特徴と要望

成蹊大学 高木新太郎

1. はじめに

本稿は、「国民経済計算年報」等いわゆる新SNAを利用した若干の特徴と、今後の要望を整理したものである。わが国の新SNAは、連続体系に準拠する形でフローの諸要定のままならず、各国にさかのぼって国民財産対照表や調整要定等のストック関係も作成しており、今後の経済分析に有益な情報を提供している。推計当否の努力に改めて感謝する次第である。他方、新SNA自体発達途上のため、推計系列の短さをはじめいくつかの利用上の制約もある。したがって、その特徴や要望も多岐にわたるが、ここでは3つに分けて考える。第1は、推計の現分野に限定した議論であり、後述するように土地評価額と消費支出を取り上げた。第2は、現在の推計・公表に関する要望であり、第3は長期的課題である。なお、土地評価額に関する議論は、日本経済研究所等の助成による研究の一端であり、多費目消費分析については竹内克己氏（電通）、武藤博道氏（日経センター）との共同作業の一部である。多費目消費分析の結果の公表を快く許された竹内克己氏に謹意を表したい。また紙幅の関係で、必要な関連諸表を大幅に圧縮せざるを得なかったことを予めことわっておく。

2. 土地評価額について

「国民経済計算年報」に公表されている土地関連データでは、⑴土地部門別土地取得購入額、⑵土地部門別土地資産額、⑶土地部門別土地調整額、⑷土地部門別（区区分）土地資産・取引・調整額、⑸土地部門別、個人法人別・県別土地資産額の5系列である。このうち、国民財産対照表からの要領があるので、土地は調整別の整理であり、⑹は土地の持つ特殊な要望を生かした情報提供と言える。こうして、土地評価額が社会経済の枠組の中で、他の経済要望と整合的に把握されることは画期的であると言ってもよい。まずストックについて言えば、戦後の財産調査が資本構造等の資本の効率性を主目的としてきたこともあって、土地は調査的なことは無視されてきた（ただし昭和30年調査では、分析に配慮した土地面積を調査、さらに国際的にもって、第1次普段を中心とする諸国では土地の公式推計も行なわれたが、欧米先進国では個人レベルの推計にとどまっていた（この点[6]も参照されたい）。フローの土地購入額についても、わが国での推計は今まで一部試算されたこともあったが、比較的新しい領域に属する（たとえば[13]）。

国連のガイドライン（1）、（2）は、多角的な国民統計システムを考慮すること、それに応じた長所と短所を有する。すなわち分析視野の拡大とそれに対するアイデアが盛り込まれたという長所と、産業関連と戦略得の統合にまつわる問題、ダブルデフレーションの是非等々の未解決な論点を残している。ストック面の国民財産対照表（2）と有形資産統計の関係も同様である。もっとと両者は相互に対立するものではないが、富の所有を重視する国民財産対照表と生産関係を重視する実物資産では、部門分類をは