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**Statistics Sweden's priorities to improve the  
National Accounts with information on the  
Service Sector**

session 4

*Abstract: Changes from the 1968 System of National Accounts, SNA, to 1993 SNA with focus on how they influence the need for service statistics. Areas of interest are lifetime of gross fixed capital formation, definitions of institutional unit, identification and definitions of different sub-sectors and types of output*

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## **1. Background**

At the eleventh meeting of the Voorburg Group in Newport we decided upon one session for Gaps and the National Accounts. One idea was to identify new needs for Service Statistics due to 1993 SNA. More generally we talked about national priorities for the compliance with the SNA and the Service Sector.

In Annex 1 to 1993 SNA "Changes from the 1968 System of National Accounts" are described. I have analysed this annex to identify the changes that concern the Service Statistics in specific. I have also discussed this question with the staff of the National Accounts Division of Statistics Sweden. Both the examination and the discussions show that alterations concerning the production of Service Statistics in specific are not that extensive. Rather the problem is that the basic needs of Service Statistics, already existing in 1968 SNA, are not provided for. However, there are some important areas that have to be focused on. In part 2 there is a report on our conclusions. *References to the Annex 1 of the 1993 SNA are given and are marked in italics.*

Between 1995 and 1997 a discussion of needs and priorities was carried through between the National Accounts and the Service Statistics. The result is described in part 3 of this paper. The debate on priorities is not quite completed as the short term statistics needs to be compared to the annual statistics.

## **2. Changes from the 1968 SNA to the 1993 SNA**

### **2.1 Present deviations from the 1968 SNA**

Statistics Sweden has not followed the recommendations of the 1968 SNA on two items that are important for the Service Statistics. The first item concerns the lifetime of gross fixed capital formation and the other concerns subsidies within market activities. In connection with the rearrangement and revision of the National Accounts these deviations ought to be reconsidered.

#### **2.1.1 Lifetime of gross fixed capital formation**

One recommendation of 1968 SNA and also 1993 SNA is that the lifetime of gross fixed capital formation (GFCF) amounts to one year or more. According to Swedish taxation rules a good has to last for at least three years to be considered as GFCF. The enterprises' accounting practise is also based on the three-year criteria for investments. Therefore the National Accounts has had

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the principle of a lifetime of three years for investments. The difference between the limits of one year and three years could be of importance for the statistics on service enterprises and might have led to an underestimation of total GFCF.

### **2.1.2 Subsidies within market activities**

The second question deals with subsidies within market activities, especially in connection with health activities. At present such transactions are treated as subsidies in the Swedish National Accounts which decreases the GDP at market price. In the SNA revision this is going to be changed, and the government expenditure will be treated as consumption expenditure.

## **2.2 Definition of an institutional unit**

13. The 1993 SNA defines an institutional unit as an economic entity that is capable in its own right of owning assets, incurring liabilities and engaging in economic activities and in transactions with other units. Corporations providing ancillary-type services to a parent corporation are merged with the parent corporation into one single institutional unit.

Also included in the corporate sectors as separate institutional units are unincorporated enterprises owned by households which have complete sets of accounts, including information on withdrawals of entrepreneurial income analogous to the payments of dividends in the case of a corporation. The 1968 SNA only made reference to one criterion - the availability of complete accounts. It did not make reference to the requirement that information on withdrawals of entrepreneurial income had to be available.

Comment: In our primary statistics the corporations that are providing ancillary-type services to a parent corporation are already merged with the main activity. But at present all unincorporated enterprises owned by households are a part of the household sector and will be so also in the new system.

## **2.3 Sub-sectors for the non-financial and financial corporation sectors**

16. The 1993 SNA recommends the non-financial and financial corporations to be identified into three sub-sectors:

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- public corporations,
- national private corporations and
- foreign controlled corporations.

17. Public corporations are controlled by the government. The government may exercise control by owning more than 50 per cent of the equity (or of the votes) or by other means such as special legislation or decree even if it holds less than 50 per cent of the equity. An enterprise is also regarded as a public corporation if it is subject to control by another public corporation.

(ESA only speaks of control and does not state it more precisely in the form of ownership or right to vote.)

18. Foreign-controlled enterprises are defined as enterprises subject to control by non-residents. Foreign enterprises in which non-resident investment is less than 50 per cent may be included or excluded by individual countries according to their qualitative assessment of foreign control.

Comments (16-18):

1968 SNA sorted out public corporations but not the foreign controlled ones. At present there is no classification of owners in the National Accounts. The classification of owners is imperfect for service enterprises as the statistics to a large amount is based on administrative material where such information is not included.

Public corporations are registered in the business register but the quality is uncertain. The business register does not contain information on corporations that are subject to foreign control. There is a register of such corporations at Statistics Sweden, but this register mainly contains information on enterprises with manufacturing activities. The division into these sub-sectors therefore can hardly be done within the next few years.

## 2.4 New definition of the financial sector

The new definition of the financial sector includes financial auxiliaries and excludes holding companies that control mainly non-financial subsidiaries.

20. The 1968 SNA financial sector is enlarged to include, in addition to financial corporations that incur financial liabilities and acquire financial assets on their own account, auxiliaries engaged primarily in activities that facilitate financial intermediation or provide financial services without placing themselves at risk.

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21. The 1993 SNA recommends that holding companies should be assigned to the institutional sector in which the main activity of the group of subsidiaries is concentrated. Although holding companies often play a financial role they should be classified as financial corporations only when the preponderant activity of the group of corporations they control is financial. According to 1968 SNA financial holding companies were classified as financial corporations.

Comment: Earlier the Swedish National Accounts has tried to place parent companies in the sector and activity where the dominating activity belongs. At present all holding companies should be included in the dominating institutional sector and also activity. This means that class 74.15 according to NACE Rev. 1 only will be used as an alternative classification.

## 2.5 Market and other kinds of production

49. The 1993 SNA distinguishes three types of output:  
 - market output,  
 - output for own final use and  
 - other non-market output

Market output is output sold at economically significant prices which means that the price has an obvious effect on supply and demand.

Output for own final use such as subsistence output of agricultural products or own account produced capital goods, while not sold on the market, are valued at the average prices of similar products traded on the market.

Other non-market output which includes goods and services produced by government and non-profit institutions serving households and provided free, or at prices that are not economically significant, to individual households or the community, is valued at production cost (as the sum of costs).

50. The producers are distinguished in the corresponding way. The distinction between market producers, producers for own final use and other non-market producers replaces the distinction in the 1968 SNA between "industries" and "other producers". Producers for own final use which were included in the 1968 SNA in "industries" are now distinguished as a separate category.

Comment (49-50): These recommendations of the 1993 SNA are not precise. ESA 95 contains more exact rules. All output sold to other institutional units from unincorporated enterprises owned by households and from all incorpo-

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rated private enterprises are regarded as market output and the producers are classified as market producers.

Private non-profit institutions and public producers are regarded as market producers if sales cover more than 50 per cent of production costs. If the sales cover less than 50 per cent the producer is a non-market producer.

(Public producers include general government and incorporated and unincorporated enterprises owned by general government.)

51. The three-way split of products and producers is complementary to the ISIC and Central Product Classification (CPC). The ISIC and CPC breakdowns would apply in principle to all three categories of producers and products respectively.

## **2.6 Assets, capital formation and consumption of fixed capital**

The 1993 SNA implies an extension and further specification of the concepts of assets, capital formation and consumption of fixed capital.

The 1993 SNA also means an extension of produced assets and gross fixed capital formation to include expenditure on mineral exploration, computer software and entertainment, literary or artistic originals.

### **2.6.1 Definition and classification of assets**

The definition of asset and asset boundary is explicit and the classification of assets is revised in the 1993 SNA.

61. In the 1993 SNA assets recorded in the balance sheets are economic assets. These are defined as entities over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding or using them over a period of time.

With regard to the classification of assets, the 1993 SNA distinguishes at the first level of the classification between non-financial assets and financial assets/liabilities. Within non-financial assets it distinguishes between produced and non-produced assets and within each of these between tangible and intangible assets.

62-64. Here is a classification list according to 1993 SNA:

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AN.	Non-financial assets
AN.1	Produced assets
AN.11	Fixed produced assets
AN.111	Fixed tangible produced assets
AN.1111	Dwellings
AN.1112	Other buildings and structures
AN.1113	Machinery and equipment
AN.1114	Cultivated assets
AN.112	Intangible fixed assets
AN.1121	Mineral exploration
AN.1122	<i>Computer software</i>
AN.1123	<i>Entertainment, literacy or artistic originals</i>



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AN.12	Inventories
AN.121	Materials and supplies
AN.122	Work in progress
AN.123	Finished goods
AN.124	Goods for resale
AN.13	Valuables
AN.2	Non-produced assets
AN.21	Tangible non-produced assets
AN.211	Land
AN.212	Subsoil assets
AN.213	Non-cultivated biological resources
AN.214	Water resources
AN.22	Intangible non-produced assets
AN.221	Patented entities
AN.222	Leases and other transferable contracts
AN.223	Purchased goodwill
AN.229	Other intangible non-produced assets
AF.	Financial assets

Comment: Computer software and entertainment, literary or artistic originals are new for the 1993 SNA and these variables are important for the service enterprises both from the production and demand side.

### **2.6.2 Computer software**

67. The 1993 SNA treats systems and standard applications computer software that a producer expects to use in production for more than one year as an intangible fixed asset, no matter whether the computer software is purchased in the market - separately or together with the hardware - or developed in-house. It also includes databases which the enterprise expects to use for more than one year. The 1968 SNA was interpreted as treating expenditures on software which is bought as an integral part of a major hardware purchase as gross fixed capital formation, but software purchased or developed independently was treated as intermediate consumption.

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Comment: If we continue in the National Accounts to have the criterion on a lifetime of three years (see part 2.1.1) we might not get any computer software as gross fixed capital formation. The primary statistics will probably receive purchases of software classified as intermediate consumption. Own produced software will probably be shown as costs of production in form of wages and salaries. These two types of software costs must be shown separately in the service statistics in order to make it possible for the National Accounts to reclassify them to GFCF.

### **2.6.3 Literary or artistic works**

68. In output the 1993 SNA includes literary or artistic work, for example the writing of books and composing music which are produced for sale whether they are produced by employees or by self-employed workers. Furthermore, it recognises that these outputs can contribute to production in subsequent periods and, therefore, treats expenditures on these outputs as gross fixed capital formation resulting in the creation of an intangible fixed asset. Consequently, fees, commissions, royalties etc. stemming from licensing others to make use of the works are treated as payments for services rendered. Accordingly, copyrights no longer appear as non-financial non-produced intangible assets giving rise to property income, as they did in the 1968 SNA.

### **2.6.4 Research and development**

69. Like the 1968 SNA, the 1993 SNA continues to treat expenditures on research and development as intermediate consumption, not gross fixed capital formation. However, it recommends that these expenditures shall be identified within intermediate consumption to facilitate the development of satellite accounts for research and development.

Comment: This is an area where we need to investigate the statistical possibilities and put more resources to develop R&D-statistics.

### **2.6.5 Work-in-progress on services**

73. The 1993 SNA recognises that certain kinds of services take a long time to produce, for example architectural design, software development, project development and writing of books. Work-in-progress in service industries is to be recorded as change in inventories by the producers of such services. The 1968 SNA did not include any work-in-progress on services.

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Comment: How to measure this variable ought to be tested in different pilot studies.

## **2.7 Financial and operating leasing**

The 1993 SNA implies a distinction between financial leasing and operating leasing. It recognises financial leases as financial instruments. Financial leases are distinguished from operating leases in that the former cover leases where the intention is to transfer all risks and rewards incident to ownership to the user of the asset. Assets acquired under financial leasing arrangements are to be treated as assets of the lessees, and the lessors hold a corresponding financial asset which is the equivalent of a loan. Lease payments under financial leases must be recorded in the financial account. The 1968 SNA did not recognise financial leases and, as a consequence, treated them in the same manner as operating leases.

Comments: In the Swedish National Accounts financial leasing is already treated according to the 1993 SNA definition. Information is given by an annual survey but the coverage is not complete. There is also need for a closer check on how the enterprises are treating financial leases in their book-keeping.

## **2.8 Real output of non-market services**

Measurement of the real output of non-market services should be based whenever possible on output indicators.

The 1993 SNA stresses that valuing the output of non-market producers as the sum of costs does not mean that their output cannot be distinguished from the inputs used to produce them. Volume movements for non-market output should therefore be based on output and not input indicators, whenever possible. Adjustments should also be made for changes in quality. The 1968 SNA gave very little guidance on the measurement of the real output of these non-market services.

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## 2.9 Summary

Here is a list of the areas where the Service Statistics has to focus on and also put resources to in order to meet the needs of the NA.

1. Assets and GFCF
  - a) One recommendation of SNA is that the lifetime of GFCF amounts to one year or more.
  - b) Definitions and classifications: computer software and entertainment, literacy or artistic originals are new.
  - c) Work in progress in service industries must be recorded.
2. Sector definitions
  - a) The non-financial and financial corporations are recommended to be identified into three sub-sectors:
    - public corporations,
    - national private corporations and
    - foreign controlled corporations.
  - b) The new definition of the financial sector includes financial auxiliaries and excludes holding companies that control mainly non-financial subsidiaries.
3. Market and non-market
  - a) Three types of output are distinguished:
    - market output,
    - output for own final use and
    - other non-market output.
  - b) Whenever possible measurement of the real output of non-market services should be based on output indicators.
4. Specific concepts or details
  - a) Research and development expenditures shall be identified within intermediate consumption to facilitate the development of satellite accounts for R&D.
  - b) A distinction between financial leasing and operating leasing is implied.

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Lease payments under financial leases must be recorded in the financial account.

### **3. Needs and priorities to improve the National Accounts with information on the Service Sector**

#### **3.1 Background**

Over a period of two years, 1995-97, the unit of service statistics and the unit of National Accounts have discussed how to improve the services statistics with focus on the National Accounts' (NA) need. The discussion started with an evaluation of the "Programme for development of Service Statistics" from 1985. A lot of important improvements have been done, e.g. better statistics on small enterprises including sole proprietorships and more information on service products according to CPA or CPC. One idea, applied since 1985, was the multi-annual programme for industry specific surveys. In the evaluation NA was very clear about preferring annual data with less details to multi-annual data with more detailed information. The NA need for time-series and development figures was stressed frequently.

The discussion was mainly concentrated on annual production accounts. Needs for quarterly production and consumption accounts were discussed in another project. In the end, priorities have to be done between annual and quarterly statistics.

First we identified the general needs of variables, needs which are independent of activity class. These discussions were mainly co-ordinated with manufacturing statistics. Important questions were coverage and break down of result to activity classes.

Then we identified the needs on industry specific information. Important questions to solve are frequency (annual or multi-annual information) of data and for which size classes this information can be accessible.

The discussion was based on needs for the new SNA and ESA and the Regulation for Structural Business Statistics.

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### 3.2 Coverage

The first and very important need for NA is *total coverage of all service industries, all size classes and all kind of legal forms*. The gaps we have to fill are better information on a) real estate activities b) all small firms and sole proprietorships without employees and c) non-profit organisations.

Comments: a) Real estate activities will partly be included in annual statistics from reference year 1997. b) Administrative data (tax data) will be used for small firms from reference year 1996. c) A pilot study will be carried out for non-profit organisations during 1997-98.

### 3.3 General characteristics/variables

Together with the programme for manufacturing statistics we identified the need for a set of general variables.

For all industries NA needs the following information:

- a) Production value (usually revenues)
  - main production
  - sales of goods purchased for resale
  - ./. purchases of the same goods valued at repurchasing price at the time they are sold
  - = (trade margins)
  - all other production
  - . revenues from rentals of industrial and other premises
  - . others
- b) Intermediate consumption
  - rentals of industrial and other premises
  - insurance-fees
  - fees for financial leasing
  - freights and transports
  - inventories (1-3 year)
  - losses on current receivables
  - other intermediate consumption
- c) Salaries
- d) GFCF
  - constructions of new buildings and structures (excl. Land) and improvements of buildings

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- acquisitions of existing buildings and structures
- own produced buildings and structures
- disposals of buildings and structures
- acquisitions less disposals of land
- acquisitions less disposals of new and used machinery and transport equipment
- value of new financial leasing contracts
- acquisitions less disposals of software
- own produced software

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- e) Employment
  - working hours
  - . entrepreneurs
  - . employees
  - "Average number" of employed (if "working hours" is impossible)
  - . entrepreneurs
  - . employees

Comments: All variables will be included in the annual statistics base on direct surveys (questionnaires) from 1997 but some of the variables will not be available for small firms for which the statistics is based on administrative material.

The definition of GFCF needs to be analysed. The following variables are completely new and connected to the 1993 SNA: value of new leasing contracts, acquisitions less disposals of software and own produced software. Here we have the problem with the lifetime of GFCF as an GFCF has to last for at least three years to be considered as an GFCF by the enterprise. We may possibly collect the gap (between one and three years) of GFCF from the cost side.

### **3.4 Level of presentation of result**

The NA need of breakdown into industries is presented in Annex 1. Nearly all these activities are covered from reference year 1996. The largest gap consists for the Real Estate Activities where it is very difficult to meet the detailed need for the NA.

### **3.5 Industry specific variables**

We have discussed every activity class in detail and examples of important gaps to fill are presented below.

#### *Retail trade and wholesale trade*

Margins

Intermediate consumption

Sales of 1) motor vehicles, 2) spare parts and 3) repair

#### *Hotels and restaurants*

Margins

Intermediate consumption



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Sales of 1) accomodation services and 2) restaurant services

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*Transport*

Sales from 1) freight transport, 2) passenger transport 3) other transport  
Transport supporting activities  
Sub-contracting

*Post- and telecommunication*

Information on volumes (P&Q)  
Production value for separate telecommunication activities

*Real estate activities*

Information on different kind of buildings

*Renting*

Margins

*Architectural and engineering activities*

Sub-contracting

*Education*

Market and non-market activities and borderlines

*Health and social work*

Remuneration from general government  
Patient "fees"  
How to define "subsidies" and "sales of services"?

*Activities of member organisations*

Information on the non-market sector

*Recreation, culture and sporting activities*

Motion picture: Sub-contracting  
Television: Retail trade  
Sporting activities: non-profit activities, subsidies  
Horse race: Gambling and betting activities  
Gambling and betting has to be separated from other activities since the output value of lotteries and gambling consists of the amounts paid by the gamblers minus the prizes (winnings) paid to the winners.

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Comments: We have made the following priorities:

- a) To fill as much gaps as possible from the reference year 1997 for firms that are surveyed directly, with the focus on margins, sub-contracting and intermediate consumption.
- b) To run special surveys for real estate activities and post- and telecommunication from reference year 1997.
- c) To make pilot studies for non-market sector activities during 1997 and 1998.
- d) To start a development work for better statistics on recreation, culture and sporting activities.

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**Annex 1****Nace Rev. 1****Industry**

G 50	Sale, .. and repair of motor vehicles..., retail sale of automotive fuel
G 50.2	Maintenance and repair of motor vehicles
G 51	Wholesale trade
G 52	Retail trade
H 55	Hotels and restaurants
I 60	Land transport
I 60.1	Railways
I 60.21	Other scheduled passenger land transport
I 60.22	Taxi operation
I 60.23	Other land passenger transport
I 60.24	Freight transport by road
I 60.3	Transport via pipelines
I 61	Water transport
I 62	Air transport
I 63	Supporting and auxiliary transport activities; travel agencies
I 63.1	Cargo handling and storage
I 63.2	Other supporting transport activities
I 63.21	Other supporting land transport activities
I 63.22	Other supporting water transport activities
I 63.23	Other supporting air transport activities
I 63.3	Travel agencies and tour operators; tourist assistance activities
I 63.4	Activities of other transport agencies
I 64	Post and telecommunication
I 64.1	Post and courier activities
I 64.2	Telecommunication
J 65	Financial intermediation (non- financial)
J 66	Insurance and pension funding (non-financial)
J 67	Activities auxiliary to financial intermediation (non-financial)
K 70	Real estate activities
K 70.2	Letting of own property
K 70.201	Letting of dwellings
K 70.202	Letting of industrial premises
K 70.203	Real estate activities on a fee or contract basis
K 70.204	Property management of tenant-owners' associations
K 70.209	Letting of other property

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**Nace Rev. 1****Industry**

K 70.1+.3	Real estate activities with own property and on a fee or contract basis
K 71	Renting of machinery and equipment without operator and of personal and household goods
K 72	Computer and related activities
K 73	Research and development
K 74	Other business activities
K 74.1 ex 74.15	Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy
K 74.15	Management activities of holding companies (distributed to each industry)
K 74.2-.3	Architectural and engineering activities and related technical consultancy; Technical testing and analysis
K 74.4	Advertising
K 74.5-.8	Labour recruitment., investigation and security activities; miscellaneous business activities
M 80	Education
N 85	Health and social work
N 85.1	Human health activities
N 85.2	Veterinary activities
N 85.3	Social work activities
O 90	Sewage and refuse disposal, sanitation and similar activities
O 90.001	Sewage disposal
O 91	Activities of membership organisations
O 92	Recreation, cultural and sporting activities
O 93	Other service activities
(O 95	Private households with employed persons)
(O 99	Extra-territorial organisations)