NATIONAL ACCOUNTS FOR HUNGARY
Revised Sources, Methods and Estimates - 1996 Edition

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
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FOREWORD

This publication is the result of on-going collaborative efforts between the Hungarian Central Statistical Office and the OECD’s Centre for Co-operation with the Economies in Transition (CCET), through the technical support of the OECD Statistics Directorate, to document and improve the methodology used to produce estimates of national income according to the internationally accepted standards of the System of National Accounts (1993).

This publication is the successor volume to National Accounts for Hungary: Sources, Methods and Estimates that was published in 1994. It covers the major changes in data sources and methodologies relating to national accounts that have been introduced over the last two years in order for Hungary to bring the accounts into conformity with the System of National Accounts (1993). One of the principal changes involves the presentation of accounts in a closed accounting framework. A number of areas for future work are outlined, including the development of quarterly national accounts and improvements to the reliability of estimates. The latter will require improving both the response rate to statistical surveys and the coverage of the statistical business register.

The publication is presented on the joint responsibility of the Secretary-General of the OECD and the President of the Hungarian Central Statistical Office.

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CHAPTER 1  OVERVIEW OF THE NEW HUNGARIAN NATIONAL ACCOUNTS

Introduction

Since the early 1970s, Hungary’s national accounts system has been influenced by both the System of National Accounts (SNA) and the Material Product System (MPS). The Hungarian system included production and generation of income accounts for branches and sectors as well as income distribution, use of income and capital accounts all based on data for institutional units. However, government transactions and transactions with the rest of the world were only very partially covered. This system is described in detail in National Accounts for Hungary: Sources, Methods and Estimates, a joint OECD/Hungarian Central Statistical Office publication, issued in 1994. Although the Hungarian National Accounts (HNA) cover the whole period from 1960, the system described in the publication refers mainly to the years 1989-91. It will be referred to as 1989-91 HNA.

The Hungarian National Accounts have been significantly revised since the appearance of the publication mentioned above and largely in response to its findings, which used the recommendations of the 1993 System of National Accounts (1993 SNA) as guidelines. The HNA is now closer to that system. National accounts data according to the revised HNA (hereafter called the New HNA) for the period 1991-93 were first published by the Hungarian Central Statistical Office (HCSO) in summer 1995. In summer 1996 the estimates for 1991-93 were revised when the final results for 1994 were prepared. This report presents the main changes introduced in New HNA in 1995 and 1996. It represents the first results of a longer term development project for the HNA and an important stage in this project. However, more work is needed before a complete system of national accounts according to the 1993 SNA is available in Hungary. The future work concerning extensions and improvements of the HNA is discussed in Chapter 8.

The main changes introduced in the New HNA, ranging from the introduction of the 1993 SNA sequence of accounts and institutional sectoring, data sources, classifications, to definitions and methodology are described below and in the following chapters. The description gives an overview of the new features in the HNA and emphasises the changes that have been introduced. Those interested in the previous system are referred to the earlier publication mentioned above.

The central framework of New HNA

The New HNA covers the years 1991 onwards. As a result of this major revision the data for 1991 onwards cannot be compared directly with the data before 1991. Like the previous system, the New HNA includes production and generation of income accounts by kind of economic activity and subsectors of ownership, and the accounts by institutional sectors include all those from production to capital formation. A main feature of the New HNA is the presentation of the accounts in a closed accounting framework, which was not the case before. This framework consists of the goods and services account for the total economy and the following accounts for the main sectors based on institutional units:
-- production account, recording the activity of producing market and non-market goods and services with value added as the balancing item;

-- generation of income account, which records the income generated by the production process from the producer's point of view, with operating surplus/mixed income as the balancing item;

-- allocation of primary income account, showing the claims on value added by institutional units income including property income and closing with the balance of primary income;

-- secondary distribution of income account, recording the redistribution of income through transfers with disposable income as the balancing item;

-- redistribution of income in kind account, showing social transfers in kind, i.e. individual non-market goods and services produced and purchased by government and non-profit institutions which benefit households although the household does not incur the expenses and with adjusted disposable income as the balancing item;

-- use of disposable income account, which records final consumption expenditure and saving;

-- use of adjusted disposable income account, recording actual final consumption and saving;

-- capital account, recording transactions linked to acquisition of non-financial assets and redistribution of wealth through capital transfers with net lending/borrowing as the balancing item.

The main SNA sectors which the framework distinguishes are:

-- non-financial corporations, institutional units mainly producing market goods and non-financial services;

-- financial corporations, institutional units engaged in financial intermediation, insurance and auxiliary financial activities;

-- general government producing mainly non-market individual and collective services;

-- non-profit institutions serving households (NPISHs), covering legal units producing non-market individual services to households with resources mainly obtained as voluntary contributions;

-- households consisting of all physical persons as consumers, but also as owners of unincorporated enterprises;

-- the rest of the world.

Their coverage will be discussed further in chapter 2.

This central framework, i.e. the accounts by institutional sectors as described above, is shown in the Annex Tables 1.1-1.4 for the period 1991-94. The system is not yet fully articulated, because all the necessary information is not available; in particular the distributive accounts for general government and the rest of the world are still significantly incomplete.

The accounts are further disaggregated by kind of economic activity, subsectors of ownership, detailed transactions etc. in sets of supporting tables. These supplementary tables are now easier to relate to the main system and to each other than in the previous system, especially as they are based on a consistent set of classifications of activities, ownership sectors and transactions. A set of supporting tables

The core account in the New HNA system is still the goods and services account, called the sources and use table. It is compiled annually in current and constant prices. The compilation of the table enables checking of the consistency between sources and uses only at the level of the national economy, not at the level of industries or products. A complete set of commodity balances cannot yet be compiled because different classifications are still used, for example in production and foreign trade statistics, and because the data sources do not provide data on products or establishments. There are, however, industries where supply and use are balanced, for example for agriculture, construction of dwellings, renting of dwellings, financial services, and all types of government services. Both current and constant price accounts would benefit from extension of the use of commodity balances.

The changes introduced in the New HNA regarding statistical units, data sources and classification are described in Chapter 2. GDP by the production and expenditure approaches in current and constant prices are the subject of Chapters 3 to 5. The sector accounts are discussed in Chapter 6, experimental regional accounts are described in Chapter 7 and the orientation of the future work is described in Chapter 8. Four appendices treat some specific subjects: Appendix 3.1 Holding Gains and Losses on Inventories and Appendix 3.2 Accounting for Insurance in New HNA follow Chapter 3, Appendix 6.1 Recording of Privatisation in the New HNA follows Chapter 6. The Annex includes the national account estimates.
CHAPTER 2 STATISTICAL UNITS, DATA SOURCES AND CLASSIFICATIONS

Statistical units and registers

The enterprise remains the institutional and statistical unit throughout the national accounts. This is also the case for the production account by kind of activity for which the SNA recommends establishment based data. This is because administrative records are used as the main data source. The statistical unit in both the 1989-91 HNA and the New HNA is the tax unit as defined by the tax register. Production and value added by kind of economic activity therefore continue to refer to value added of institutional units. In connection with the planned introduction of NACE Rev. 1 in 1998 in the Hungarian statistical system, the HCSO hopes to be able to collect data by establishments for the largest enterprises which would allow the compilation of production accounts by kind of activity based on establishment data.

The business register maintained by HCSO covers (1) all corporations with legal status and (2) unincorporated partnerships and sole proprietors. It is based both on the HCSO registration process and on records maintained by tax authorities and refers to the tax units; the first eight digits of the tax registration number constitute the statistical identification code. In addition there are codes indicating kind of activity, legal form, region and size according to number of employees.

Units are classified by kind of activity according to the principal activity as measured by sales. As this does not reflect the relative importance of activities, especially in vertically integrated enterprises, HCSO is considering using employment in the different activities to determine the principal activity. Both ISIC Rev. 3 and the 1993 SNA recommend the use of value added to determine the main activity. However, ISIC Rev. 3 states that employment might be used if no other information is available. In the case of vertical integration, ISIC Rev. 3 recommends that proportional weight should be given to kind of activity or establishment units in each portion of the chain.

The register does not include any information on local or kind-of-activity units. As in other transition economies, there are difficulties keeping the business register up to date. There are two types of problem. The first is to keep up with newly created units (“births”) and the second to delete firms going out of (or never coming into) business (“deaths”). In the early period of transition, the major concern was with under - or late recording of births. Now the difficulties of identifying deaths is of equal, or greater, concern. Further, there might still be some differences between the business registers, registers kept by the registration or supervisory bodies and the enterprise data base managed by the National Accounts Department, which is described below.

As in the past, Government units are registered by the Ministry of Finance. Non-profit institutions are registered by the Courts of Law. Based on this information the HCSO has built up a register for all NPIs, not only those serving households but also those serving businesses and government. This register is used as the mailing list for the annual survey on NPIs and for grossing up the sample as described in Chapter 3.
Data sources

As in the 1989-91 HNA, the New HNA relies to a great extent on administrative data sources. Although this has certain disadvantages, such as delay in access to the data and some differences between these sources and national accounts with regard to concepts and classifications, their use is less expensive and avoids an extra response burden for respondents. In 1992, the tax declarations/financial reports collected and processed jointly by the tax authorities and the HCSO, which had been the main data sources for the national accounts, were suspended. They were replaced by the new tax declarations, more limited in scope than the previous ones. This reflects the fact that the new book-keeping system introduced in 1992 is less onerous and less detailed. The annual national accounts estimates are based on the following sources:

-- Tax declarations of corporations which contain the most important data for estimating production, intermediate consumption and value added. For about 70,000 enterprises in 1993 (about 90,000 in 1995) with an annual turnover of more than the HUF equivalent of 500,000 US dollars, the 1993 threshold, the declaration is fairly detailed. For about 60,000 enterprises (about 100,000 in 1995) with turnover below this threshold and without legal entity, the declaration is less detailed.

-- The information from the tax declarations is complemented by a special survey of the largest enterprises. This covers more than 4,000 enterprises and concerns secondary activities, costs of research and development, various kinds of social benefits in cash and in kind, and stocks of fixed assets. Value of sales and costs of production are broken down into 17 sections of ISIC Rev. 3. The data exclude intra firm deliveries.

-- The financial report of enterprises, which the new law on business accounts introduced in 1992.

If two of the following criteria are met in two consecutive years, a detailed financial report is required:
- over 100 employees;
- over 300 million HUF annual turnover;
- 150 million HUF of total assets.

The details of the report are also regulated by law. These enterprises fill in the special survey questionnaire mentioned above.

-- For financial enterprises an additional source of information is administrative records collected by the National Bank and the supervisory bodies of financial institutions, insurance companies and security dealers.

-- Personal income tax declarations covering about half a million unincorporated enterprises which report income generated in market activities to the tax office on a simple questionnaire and pay tax according to personal income tax rules. The units covered by the personal income declarations are classified to the household sector.

-- Declarations concerning taxes on products, mainly VAT declarations.

-- Annual reports of government institutions.

-- Data on household income are also complemented by information from social security records and information obtained from saving banks and insurance companies.
The production accounts by institutional sectors and by kind of economic activity are to a great extent based on these administrative data sources, while for other accounts in the system these data sources are complemented by statistical surveys, as in the past. These surveys include for example:

-- survey of agricultural products;
-- retail trade survey;
-- household budget survey;
-- survey of NPIs;
-- investment survey;
-- inventory survey;
-- employment surveys;
-- survey of publicly and privately owned dwellings completed by local government authorities;
-- price surveys for producer and consumer price indices;
-- foreign trade statistics collected and published by the Ministry of Industry and Trade, including both merchandise trade based on customs declarations and the quarterly enterprise survey of exports and imports of services; and
-- balance of payments statistics compiled by the National Bank of Hungary.

Some of these surveys are new, such as the quarterly inventory survey introduced in 1994. The monthly retail trade survey was a complete survey until 1991 and since then it has been conducted on a sample basis. It was completely revised in 1994 with the help of Statistics Canada. In addition it provides every quarter since the first quarter of 1995 a breakdown by 10 commodity groups. It is complemented by a complete retail trade census undertaken in April 1996 and referring to 1995. The retail trade census distinguishes 50-60 groups of commodities. Other surveys have been revised with regard to sample size, frequency and content, as for example the investment survey. More information on these surveys will be provided when describing the aggregate for which they are used.

The annual reports of government institutions contain sufficient information to establish the transactions on production and generation of income accounts. Reports on the execution of the budget are also used for transactions such as taxes, social benefits and certain subsidies. However, consistency between years is not entirely assured. For 1992 onwards, the reports reflect the cash principle which replaced the accrual principle previously used in the government book-keeping system. The government is however discussing the reintroduction of the accrual principle in a few years time.

The information base is still too weak to complete the other accounts for the government sector. A Treasury for the state budget was established in 1996, but the related government information system will not be operational earlier than 1997. The Treasury is responsible for recording all transactions influencing the government budget net lending/borrowing and related financial assets. The Treasury Property Management Directorate keeps the records of fixed assets of government institutions and of other assets which were previously owned by the Soviet Army stationed in Hungary, while the government share holdings are managed by the State Privatisation and Holding Share Company (ÁPV Rt). Government owned shares in commercial banks are managed by the Ministry of Finance.

A new system of balance of payments statistics became operational in 1996, which over time should improve the coherence and completeness of the New HNA. The balance of payments is in principle based on the IMF Manual on Balance of Payments Statistics Rev. 5. It is a closed system on a
cash basis, reflecting foreign exchange settlements by the banking system, and focusing on convertible currency operations. The data source is the monthly commercial banking reporting system. The BoP is therefore presently based on cash flows and not transactions.

Classifications

Kind of activity classification

A new industrial classification was introduced in 1992, the Hungarian acronym known as TEAOR 92. It corresponds to ISIC Rev. 3/NACE Rev. 1 at the level of 60 divisions. At the third and fourth level certain deviations exist. As mentioned before it is enterprises not establishments which are classified according to their main activity in TEAOR 92. In 1998, the HCSO will probably adopt the complete NACE Rev. 1 as the national classification. HCSO hopes that in this connection establishment based production statistics can be developed for the 100-200 largest enterprises.

Product classification

For the period 1991-95 different product classifications are used for production and foreign trade statistics. In 1996 a common classification based on the Combined Nomenclature was adopted.

Institutional sectors

Major changes in the definitions and coverage of institutional sectors have been introduced in the New HNA.

Non-financial corporations include:

-- state owned enterprises, which in principle were transformed to public corporations by the end of 1993. However, by mid-1996, a few of them still had identification codes as state-owned enterprises because the transformation process was not yet complete;
-- co-operatives;
-- private and public non-financial enterprises with legal status created according to the corporation law (limited liability companies, share corporations, etc.);
-- non-financial enterprises without legal status but having double-entry bookkeeping;
-- non-financial enterprises without legal status and with single-entry cash accounting, for example unlimited partnerships (called quasi-corporations in the HNA);
-- non-profit institutions serving enterprises and financed by enterprises, such as chambers of commerce, business and trade organisations or those covering more than 50 per cent of the costs by sales. In the 1989-91 HNA, these were included among government units and non-profit institutions.

Financial corporations in the 1989-91 HNA, although included in the enterprise sector, were considered non-market producers and their output was estimated at cost. They are now treated as market producers and include:

-- the National Bank of Hungary, i.e. the central bank;
-- commercial and savings banks;
-- security dealers;
-- insurance companies; and
-- producers of auxiliary financial services.

General government covers the units mainly financed by the budgets of the Central Government and the Decentralised Funds, Local Government and the Social Security Fund. It also includes some non-profit institutions which are mainly financed by the budget. Other non-profit institutions have been allocated to other sectors based on the main provider of their resources.

Non-profit institutions serving households (NPISHs) include trade unions, political parties, religious organisations and sport and cultural organisations. These are mainly financed by fees and other contributions. In practice most of these contributions come from households.

Households, in line with 1993 SNA, cover the activities of households both as consumers and, where appropriate, as producers in the form of unincorporated enterprises (small sole proprietors). In the 1989-91 HNA these production activities were included in the enterprise sector.

The rest of the world account which was not shown in the 1989-91 HNA, is included in the New HNA.

Concerning the limitations of the sectors it should be noted that the government sector still includes more units with market production than is normally found in Western countries. Government units have the possibility and are encouraged to develop additional or new services for which they can charge to cover their costs. However, the information for government units does not permit the complete separation between mainly market and mainly non-market units. On the other hand, several government institutions were transformed to non-profit institutions, such as associations, foundations and public benefit NPIs. They are mainly financed by government contributions. Only these contributions are included in the government budget. In the New HNA these NPIs are, however, included in the government sector although the information concerning them is less detailed than for budgetary institutions.

It should also be noted that the government sector includes the State Holding Company (ÁV Rt), which up to 1995 together with the State Property Agency, organised the privatisation of state owned enterprises and managed the government shares in corporations. According to the SNA this should instead be recorded in one of the corporate sectors. However, it has been allocated to the government sector because it did not have any operating resources other than those provided by the state budget. In 1995 these two agencies were merged under the name of State Privatisation and Holding Share Company (ÁPV Rt). This is still included in the government sector, because the transition period during which the organisation and management of privatisation is considered a genuine government activity is not yet over. Its operational costs are covered from government privatisation revenues.

**Classification by legal form**

When an enterprise is registered it is given a code indicating the legal form of business and control. This defines the legal rules with which the enterprise must comply. This code provided the starting point for the sectoring in the HNA. The classification by form of business and control was revised in 1994 to follow the changes in the legislation, for example regarding state enterprises which had to be transformed into companies and new forms of non-profit institutions. It has been introduced in the New HNA from 1994 onwards. As the present legislation does not differentiate between private and public enterprises, the classification by legal form can no longer show this distinction. The Annex Table 4.2.1
uses the classification by Legal Form valid until 1 January 1994 while the Annex Table 4.2.2 uses the new classification.

Ownership classification

In the tax questionnaire the following kinds of participation in corporation equity (ownership) are listed:

-- central government;
-- local government;
-- resident private persons;
-- national non-financial corporations;
-- national financial corporations;
-- employees’ participation scheme;
-- non-distributed equity of co-operatives; and
-- foreign owners.

The sub-sectoring of non-financial corporations is based on this information. The New HNA subdivides the sector of non-financial corporations into three sub-sectors following the recommendations of the 1993 SNA:

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

Enterprises with over 50 per cent of the equity either publicly or foreign owned are classified to the public and the foreign controlled sub-sectors respectively. However, enterprises belonging to ÁPV Rt, the State Privatisation and Holding Share Company, are classified as public because the government holds the voting rights, even though it may hold less than 50 per cent of the shares. All remaining corporations are treated as national private corporations, including enterprises which might be owned by another enterprise with government or foreign ownership but where there is insufficient information on ownership structures. This sub-sector also includes non-profit institutions financed by member enterprise contributions.

In the reference period the majority of financial corporations were still state owned. Therefore, a similar sub-sectoring has not yet been introduced for this sector. On the other hand another subdivision is used for publications purposes following an alternative SNA recommendation, namely enterprises engaged in

-- financial intermediation and related auxiliary services (including the National Bank of Hungary); and
-- insurance and related services.

Insurance has recently been partly privatised and some foreign insurance companies already operate in Hungary. The privatisation of banks is under way. In the future therefore, the public/private/foreign breakdown might also be introduced for the financial corporation sector, if HCSO has access to individual data for commercial banks from the bank supervisory body.
Other classifications

For household consumption two classifications are used, one referring to expenditure groups, the other to purpose. Both will be described in connection with household consumption expenditure in Chapter 4.

The classification of tangible fixed assets will also be described in the same chapter in connection with gross fixed capital formation.

Data base for non-financial corporations

Based on the data sources mentioned above a data base for non-financial corporations has been developed by the National Accounts Department in co-operation with the Institute of Economic Analysis and Information Technology, Ministry of Finance. For 1995, the data base includes data concerning approximately 200,000 non-financial enterprises, which is a nearly complete coverage of the Hungarian business sector. According to the tax law and the statistical law, the HCSO has access to individual tax declarations except for non-entrepreneurial physical persons. Both original data and derived data are stored. It also contains all classifications used in the HNA. Three groups of data suppliers are distinguished:

-- large corporations;
-- small corporations; and
-- quasi-corporations.

The coverage of large corporations and quasi-corporations is defined above in the section Data Sources.

The statistical survey returns for the large enterprises are considered more reliable than corresponding tax declarations, because the completed questionnaires are controlled by the regional statistical offices. Therefore data items from the tax declarations for the large enterprises are replaced by those from the statistical survey when they differ. Missing data on the number of employees and wages and salaries are substituted by those from the enterprise labour force survey. The differences in accounting identities contained in the original data and those resulting from substitution of data are recorded under the item “Miscellaneous” either as revenue or expenditure. Data on gross fixed capital formation are based on the investment survey.

The storage and aggregation level of the variables depend on the size category of the enterprise and on the type of variable. The data on quasi-corporations are stored only at the aggregated level because of their large number. Very strict access rules apply to the database in order to protect data on individual enterprises.

The data base is used for compiling all the accounts for non-financial corporations. It is the link between the book-keeping system on the enterprise level, the meso level and the national accounts system. At the same time it provides a fairly powerful tool for making various economic analyses of the business sector.

A publication “Financial Data of Non-Financial Corporations 1992-93” was produced by HCSO at the end of 1995. It is based on the data from the profit and loss statements and the balance sheet data in the data base. This publication will be a regular annual publication. The 1994 edition was published in electronic form in mid-1996.
A similar data base is under preparation for financial corporations and will be operational in 1997. It will cover 40-50 commercial banks, about 250 savings co-operatives, 15 insurance companies, about 250 insurance dealers and about 350 other producers of other auxiliary financial services. Because of the different accounting rules for the various types of financial corporations the construction of a harmonised data base is more complicated than for the non-financial corporations.
CHAPTER 3 GDP BY PRODUCTION

The main data sources for GDP by production for market producers are the database for non-financial enterprises and other sources such as financial reports of enterprises, reports of government institutions, etc. as described in the previous chapter. As in the past, the data sources enable the estimation of output, intermediate consumption and value added at the level of individual enterprises, which is a characteristic of the HNA. As in the 1989-91 HNA, the data by industries refer to institutional units, i.e. enterprises, and not to establishments as recommended by the SNA. This has an effect on the level of output and intermediate consumption of industries with a high degree of vertically integrated enterprises, because intra-enterprise deliveries are excluded. This is contrary to SNA recommendations. However, the level of value added is not affected.

Data are published for 60 industries corresponding to the divisions of ISIC Rev.3., cross-classified by institutional sectors, ownership and legal form. The cross-classification of industries and general government shows a higher degree of market production in general government than in most market economies. This arises from the difficulty of separating transactions related to market and non-market units in the reporting system of government units (cf. Annex Tables 2.1.1, 2.1.3, 3.1 and 4.1.).

In both the 1989-91 HNA and the New HNA, output and value added by branches are valued at basic prices, i.e. excluding taxes on products and including the value of subsidies on products. Intermediate consumption is valued at purchaser's prices. To arrive at GDP at purchaser's prices net taxes on products are added.

Output is measured as sales, plus changes in inventories of own production and own-account gross fixed capital formation. Compared to the 1989-91 HNA, it excludes sales of used assets and interest paid by employees on loans provided by the employer. The method used to value output overstates the value of output in a period of relatively high inflation as experienced in Hungary since it does not adjust for holding gains and losses on inventories of own production. If estimates of intermediate inputs for enterprises drawn from stocks are based on historic costs, intermediate consumption will be underestimated and value added and GDP overestimated for similar reasons. HCSO has developed a methodology to adjust production and intermediate consumption for the effects of inflation on inventories, and the adjustments of output and intermediate consumption will be introduced in the national accounts for 1994 onwards. Although corrections should be made for years before 1995, the data base for these years does not allow reliable estimates of the corrections, except for 1994. There are also losses on inventories due to the reorganisation and privatisation of state owned enterprises, especially for the period 1991-93. According to 1993 SNA, these losses should be considered as other volume changes in assets. However, there is no information on these other volume changes which therefore are implicitly included in the GDP estimate. A description of the method which will be used to adjust production and intermediate consumption for holding gains is given in Appendix 3.1 of this chapter.

For small enterprises using single entry book-keeping, production entering inventories of own-produced goods is not measured, so output is understated when this is positive and overstated when these stocks are being run down.
Intermediate consumption includes small assets with a service life longer than one year and having a value in the reference period of less than 20,000 HUF. The Hungarian book-keeping system for market producers treats these as gross fixed capital formation. The value is recorded as depreciation in the year of acquisition and therefore shown separately in the tax declaration. In the book-keeping of government units these small assets are treated as intermediate consumption.

**Changes introduced in the New HNA**

The main changes introduced in the New HNA for the estimation of GDP by the production approach are described below. Further work is, however, still needed to implement all SNA recommendations.

**Capital repair**

In the New HNA capital repair is no longer included in intermediate consumption, but treated as gross fixed capital formation. The total value involved for 1991 as compared to the estimates in the 1989-91 HNA, was 58.0 billion HUF. This reduced intermediate consumption for government services by 20.9 billion HUF; for corporations by 19.5 billion HUF; owner occupied dwellings by 15.6 billion HUF and unincorporated enterprises in the household sector by 2.0 billion HUF. Output for government services decreased and value added for corporations, owner occupied dwellings and unincorporated enterprises increased by corresponding amounts. For the effects on the sector accounts see Chapter 6.

**Welfare services**

Welfare services produced by enterprises for employees and their families are included as output under the main activity on a cost basis. They are partly financed by fees from employees, included in household consumption expenditure. The remaining part of the output of welfare services of enterprises was recorded as enterprise consumption expenditure in the 1989-91 HNA. In the New HNA it is treated as wages in kind in line with 1993 SNA and included in household consumption expenditure. The value of this item was 10.7 billion HUF in 1991. The change in recording does not have any effect on value added or GDP. The importance of these welfare services has decreased during recent years.

**Agricultural and forestry output**

Agricultural output is based on balances of supply and use of main agricultural products. Recurrent normal losses, but not exceptional ones, and agricultural losses after harvest are recorded as output and included in intermediate consumption of agriculture. This is a deviation from the recommendations of the SNA, but it does not affect the value of GDP. This treatment of losses is the same as in all other branches in the HNA and accords with the Hungarian business accounting rules. Agricultural and forestry output used as intermediate consumption in the same agricultural and forestry enterprises of a value of 37.5 billion HUF in 1991 is now excluded from output and intermediate consumption in line with SNA recommendations. This change has no effect on value added.

In the New HNA, output and value added for the total economy at basic prices include subsidies on agricultural export products of a value of 34.9 billion HUF in 1991. They were previously treated as other subsidies on production. This increases the value of output and value added at basic prices but reduces the adjustment for net taxes on products leaving value added/GDP at purchaser’s prices unaltered. This change affects agriculture, food industry and trade activities. The effect on agriculture and forestry is shown in Table 3.1.
Outlays on forest plantations are treated in the New HNA as work-in-progress and thus capital formation.

Table 3.1. Changes in Agriculture and Forestry, 1991

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>657.9</td>
<td>--</td>
</tr>
<tr>
<td>minus: Agricultural and forestry output used as IC in the same enterprise</td>
<td>37.5</td>
<td>--</td>
</tr>
<tr>
<td>plus: Subsidies on agricultural exports</td>
<td>--</td>
<td>4.9</td>
</tr>
<tr>
<td>Changes due to new industrial classification, etc.</td>
<td>--</td>
<td>-80.6</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>426.4</td>
<td>--</td>
</tr>
<tr>
<td>minus: Agricultural and forestry output used as IC in the same enterprise</td>
<td>37.5</td>
<td>--</td>
</tr>
<tr>
<td>Changes due to new industrial classification, etc.</td>
<td>--</td>
<td>-38.7</td>
</tr>
<tr>
<td>Value added</td>
<td>230.6</td>
<td>--</td>
</tr>
<tr>
<td>plus: Subsidies on agricultural exports</td>
<td>--</td>
<td>4.9</td>
</tr>
<tr>
<td>Changes due to new industrial classification, etc.</td>
<td>--</td>
<td>-14.3</td>
</tr>
<tr>
<td>Value added</td>
<td>--</td>
<td>194.5</td>
</tr>
</tbody>
</table>

Waste as a by product

Waste as a by product in the production process which is sold, is included in output in the New HNA. In the 1989-91 HNA it was excluded from both output and intermediate consumption of the enterprise producing the waste. It was however included in the intermediate consumption of the unit purchasing the waste. The change does not affect value added.

Housing services

The estimation methods for the output of housing services have been changed in the New HNA with regard to government housing and owner-occupied dwellings. No special estimate is made for the output of rented private housing. It is implicitly included in the output of owner occupied dwellings, because the stock of rented private dwellings cannot be separated from the total stock of private dwellings. Output of housing services provided by employers to their employees is recorded under the respective branches of the main activity. Its size and importance are gradually decreasing.

As will be described in the two following sections the stock of dwellings has been revalued in the New HNA. Table 3.2 below shows the effects of the revaluation for 1991.

Table 3.2. Stock of dwellings, 1991

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total stock of dwellings</td>
<td>1 990</td>
<td>5 704</td>
</tr>
<tr>
<td>Government owned dwelling</td>
<td>220</td>
<td>878</td>
</tr>
<tr>
<td>Privately owned dwellings</td>
<td>1 770</td>
<td>4 826</td>
</tr>
</tbody>
</table>
Local government owned dwellings

As in the 1989-91 HNA, the output of housing services of local government owned dwellings is considered partly market services, partly non-market services. In the 1989-91 HNA both market and non-market components were recorded in the non-financial enterprise sector. The output estimate was based on data on rents paid by households as reported in the survey of dwellings completed by local government agencies. This estimate differed from the one included in the household consumption expenditure estimate derived from the household budget survey (HBS) which was almost twice the local government estimate. This was partly because HBS may also have included rents paid for private dwellings which in the HNA is included in the estimate of owner-occupied dwellings.

In the New HNA, the market services component is included in the corporate sector. The output is valued at rents actually paid by households, using the same data source as the 1989-91 HNA, that is local government reports. These rents are still very low and cover mainly the maintenance costs. The non-market service component consists of consumption of fixed capital (CFC) of government owned dwellings. It is included in the output of government services and government consumption expenditure, in transfers in kind to households and in actual consumption of households. The value of CFC has been revised in the New HNA. The stock of dwellings has been revalued to current replacement costs and those of the base year. The annual stock of government dwellings in square metres is valued at the average market price which could have been obtained if the dwelling was sold unoccupied. This market value was obtained from the expert evaluation of government buildings before privatisation. These market prices are not the prices actually paid by the tenant households when purchasing the dwelling under the privatisation scheme of dwellings. The price stated in the purchase contract and paid by the tenant is much lower, about a quarter of the nominal market prices (See Chapter 6, Appendix 6.1 on privatisation).

The rate of depreciation has been changed to reflect shorter service lives. The service life of 100 years in the 1989-91 HNA has been decreased to an average of 67 years, based on weighted average lives for 5 groups of dwellings. It represents a rate of depreciation of 1.5 per cent instead of the previous 1 per cent, the obligatory norm in government book-keeping. The revaluation of government owned dwellings and the increased rate of depreciation have approximately doubled the output value of government housing services.

Table 3.3. Government owned dwellings, 1991

<table>
<thead>
<tr>
<th></th>
<th>Billion HUF</th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market services included in the non-financial corporations sector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>8.5</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>6.3</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>Value added</td>
<td>2.2</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>of which:</strong> CFC</td>
<td>2.2</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>Non-market services included in the government sector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>--</td>
<td>13.2</td>
<td></td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Value added</td>
<td>--</td>
<td>13.2</td>
<td></td>
</tr>
<tr>
<td><strong>of which:</strong> CFC</td>
<td>--</td>
<td>13.2</td>
<td></td>
</tr>
</tbody>
</table>
Owner-occupied dwellings

In the 1989-91 HNA, output of housing services of owner-occupied dwellings was measured as the sum of costs, covering CFC and current repair and maintenance. In the New HNA, output of housing services of owner-occupied dwellings is measured by an adjusted market rent reflecting rents in Budapest, other towns and small villages. The actual market rents have been adjusted downwards because they refer mainly to rents paid by foreigners which are unrealistically high for the majority of Hungarian residents. The imputed rent referring to 1993 is extrapolated back to 1991 with the geometric mean of CPI (used in renting contracts) and the PPI for construction. It should be noted that the output covers all private dwellings: both those occupied by the actual owner and those let directly by the owner or through an agency. However, the rent for dwellings let through an agency is also included in the output of real estate agencies which means a double accounting with regard to output. As it is also included in the intermediate consumption of real estate agencies there is no double accounting with regard to value added.

The new estimate of intermediate consumption no longer includes expenditure on capital repairs. The CFC for owner-occupied dwellings is calculated using the annual average construction price per square metre as replacement costs. The same depreciation rates are used as for government owned dwellings. The CFC is needed to obtain net operating surplus/mixed income for owner occupied dwellings (See Chapter 6 Sector Accounts). In the 1989-91 HNA the difference between output and CFC was allocated to intermediate consumption. In the New HNA this difference is equally split between intermediate consumption and operating surplus.

The new methodology has the following effects on the estimates of stock of dwellings, the rate of depreciation and the output of housing services of local government and owner occupied dwellings for 1991.

Table 3.4. Owner-occupied dwellings, 1991

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>56.5</td>
<td>139.8</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>38.8</td>
<td>33.7</td>
</tr>
<tr>
<td>Value added</td>
<td>17.7</td>
<td>106.1</td>
</tr>
<tr>
<td>of which: CFC</td>
<td>17.7</td>
<td>72.4</td>
</tr>
<tr>
<td>Net operating surplus</td>
<td>--</td>
<td>33.7</td>
</tr>
</tbody>
</table>

Own-account construction of dwellings

In the past, the output of own-account construction of dwellings did not include the non-market production of capital repairs. This has now been corrected in the New HNA with the following effect in total construction activity in 1991.

<table>
<thead>
<tr>
<th></th>
<th>Billion HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>+7.8</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>+4.7</td>
</tr>
<tr>
<td>Value added</td>
<td>+3.1</td>
</tr>
</tbody>
</table>
The output amounts to half of the 15.6 billion HUF mentioned in the paragraph concerning capital repairs. The other half (7.8 billion HUF) was already included in the 1989-91 HNA as market output.

The value of intermediate consumption (4.7 Billion HUF) was previously included implicitly in the intermediate consumption of owner-occupied dwellings. Now it is estimated explicitly using the intermediate consumption/output ratio of small entrepreneurs classified to construction. The value added figure is a new estimate, which did not exist before.

Financial intermediation and insurance services

Financial intermediation and insurance services are treated as market services in the New HNA. The data for this branch exclude secondary activities of financial institutions, which are separated from the main activities and allocated to the relevant branch. For example, real estate activity of saving banks is managed by a subsidiary of the saving bank and classified to the real estate branch. The law on financial institutions restricts auxiliary activities to certain well specified cases.

Financial intermediation services indirectly measured (FISIM) is calculated as the difference between interest received and interest paid, without correction for interest received on own capital or other property income received. It is not allocated to the users of the services, but follows the 1968 SNA treatment i.e. it is accounted as intermediate consumption of a nominal sector. The output of other financial services is estimated by the fees and commissions actually charged. It is allocated to users, either as intermediate consumption of enterprises, government and NPISHs, or as final consumption of households.

The new accounting and estimation methods for financial intermediaries have the following result compared with the old system.

<table>
<thead>
<tr>
<th>Resources</th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>90.0</td>
<td>152.2</td>
</tr>
<tr>
<td>of which: FISIM</td>
<td>--</td>
<td>107.7</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>46.8</td>
<td>50.3</td>
</tr>
<tr>
<td>Value added</td>
<td>44.0</td>
<td>101.8</td>
</tr>
<tr>
<td>Uses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate consumption of corporations, government and NPISHs</td>
<td>--</td>
<td>41.7</td>
</tr>
<tr>
<td>Intermediate consumption of a nominal sector</td>
<td>--</td>
<td>107.7</td>
</tr>
<tr>
<td>Collective consumption</td>
<td>90.0</td>
<td>--</td>
</tr>
<tr>
<td>Household consumption</td>
<td>--</td>
<td>2.8</td>
</tr>
</tbody>
</table>

The imputed insurance service charge is estimated as the difference between insurance premiums received, plus interest on technical reserves and claims paid, plus changes in technical reserves. It is allocated to users. At present, insurance services cover life and non-life insurance and pension funds. Pension funds were introduced by law in 1993. Since then, 70-80 voluntary pension funds have been established as NPIs, and data for them have been included for 1994 as life-insurance. In the future they will be recorded separately. Both employers and employees can make contributions to the pension funds.
If the employers’ contribution exceeds 25 per cent of wages and salaries per employee, compulsory social security contributions for health and pensions have to be paid on the amount exceeding the 25 per cent. This social security contribution rate was 44 per cent in 1995. Fifty per cent of the premiums paid by households to pension funds can be deducted as tax benefits, to a maximum of 100 000 HUF per year. Insurance companies also have pension policies, but the tax benefit on the premiums is only 20 per cent. Appendix 3.2. The Accounting of Insurance in the New HNA, provides more detail concerning the estimates for insurance services.

**Services of non-profit institutions (NPIs)**

*NPIs serving enterprises, included under ISIC Division 91*

NPIs serving enterprises are now included in the non-financial corporate sector. They were previously included under government services. Their output is financed by fees paid by enterprises or by sales revenue covering more than 50 per cent of their costs. If fees or sales do not cover costs, negative operating surplus will decrease GDP. For 1991, NPIs serving enterprises are included in the sector NPIs serving households in Annex Table 1.1.

<table>
<thead>
<tr>
<th>Table 3.6. <strong>NPIs serving enterprises, 1991</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource</td>
</tr>
<tr>
<td>Output</td>
</tr>
<tr>
<td>Intermediate consumption</td>
</tr>
<tr>
<td>Value added</td>
</tr>
</tbody>
</table>

During 1996, some revisions were made to the estimates for 1993 and later years in order to correct for non-response. These corrections increased output and value added approximately four times. In addition, other market NPIs were classified to the corporate sector and included under the relevant ISIC divisions according to their main economic activity.

<table>
<thead>
<tr>
<th>Table 3.7. <strong>NPIs serving enterprises, 1993</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>New HNA</td>
</tr>
<tr>
<td>Estimates made in</td>
</tr>
<tr>
<td>Output</td>
</tr>
<tr>
<td>Intermediate consumption</td>
</tr>
<tr>
<td>Value added</td>
</tr>
</tbody>
</table>

**Non-profit institutions serving households (NPISHs)**

The NPISHs form a separate sector in the New HNA. They are mainly financed by membership fees from households and their output is estimated as the sum of costs i.e. intermediate consumption, compensation of employees, consumption of fixed capital and other taxes on production (net). The
estimates are based on a special survey of NPIs conducted annually by the National Accounts Department and the Department of Social Statistics. The survey provides data on the cost structure for market and non-market activities separately. The estimates for political parties are based on their public reports. The questionnaire completed by churches is a simplified one. The kind of activity is defined by the document submitted to the registration court at the creation of the NPI. NPISHs are mostly found in activities such as education, health and social services, cultural, religious and recreational services (See table 3.5.5 in the Annex). In the past their output was included in the output of government services.

<table>
<thead>
<tr>
<th>Output</th>
<th>Billion HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989-91 HNA</td>
<td>New HNA</td>
</tr>
<tr>
<td>Output</td>
<td>--</td>
</tr>
<tr>
<td>of which: market output</td>
<td>--</td>
</tr>
<tr>
<td>non-market output</td>
<td>--</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>--</td>
</tr>
<tr>
<td>Value added</td>
<td>--</td>
</tr>
</tbody>
</table>

In 1996, the estimates for NPISHs were revised. The survey results were grossed up for non-response. Some NPISHs have also been reclassified to the government sector because they are mainly financed by the government sector. This is described in the section “Government services” below. These changes doubled the value added for 1993, as shown in the following table.

<table>
<thead>
<tr>
<th>Output</th>
<th>Billion HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New HNA</td>
</tr>
<tr>
<td></td>
<td>Estimates made in</td>
</tr>
<tr>
<td></td>
<td>1995</td>
</tr>
<tr>
<td>Output</td>
<td>49.6</td>
</tr>
<tr>
<td>of which: market output</td>
<td>8.3</td>
</tr>
<tr>
<td>non-market output</td>
<td>41.3</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>35.2</td>
</tr>
<tr>
<td>Value added</td>
<td>14.4</td>
</tr>
</tbody>
</table>

**Government services**

The output of government services in the New HNA is estimated as the sum of costs and it is based on the annual reports of government institutions, which provide the data directly by kind of activity. In the 1989-91 HNA, output of government services covered non-market production, estimated as cost, as well as output of secondary market activities, which was measured by sales and for which the related production costs were distinguished and a net operating surplus was derived. Non-market production activities could also generate some incidental sales of market output. The then existing government reporting system could provide this information by kind of activity. With the introduction of the new book-keeping system for government units in 1992, a distinction is made between market sales of “principal activities” and so called “entrepreneurial activities”. For market sales of principal activities both the relevant activity and the related costs are reported. For the “entrepreneurial activities” the sales revenue and the related costs are also reported, but not the activity. In the national accounts compilations, the sales and the costs of entrepreneurial activities are allocated to the kind of activity of the reporting unit.
Although information, in principle, is available to derive an operating surplus or loss for both sales of principal and entrepreneurial activities of government, HCSO has decided to treat all sales as incidental sales and to estimate total output of government services as the sum of costs.

For 1991, the then existing reporting system used a revenue concept which included revenue other than that from sales. Therefore the market output was overestimated in the 1989-91 HNA. In the New HNA, the ratio of sales revenue to other revenue in 1992 was applied to the 1991 data. It decreased the value of sales by about 30 per cent for 1991. However, the existing kind of activity structure was retained. It should be noted that the figures for 1991 in the New HNA are based on the accrual principle, while those for 1992 and onwards are based on the cash principle.

Estimates of CFC of government fixed assets have been revised to cover assets with long service lives such as roads, bridges, etc. CFC also covers military assets which can have a civil use. Before 1992, not all assets were recorded. For example military institutions had only single entry book-keeping and no balance sheets. Now the government units are encouraged to record all assets on their balance sheets. An inventory of assets in physical terms is being established by the Ministry of the Interior for the sub-sector of local government. The distribution of assets between sub sectors of general government has been established by law, but there are still unsettled cases. The estimates are based on preliminary estimates of assets at current and constant replacements costs, as recommended by the SNA, instead of at historic costs as in the 1989-91 HNA. The current and constant price values are now the same in the base year. The estimates use detailed data for 1991 on the government capital stock at historic costs by the activity classification in use then, which were recalculated to 1991 prices and converted approximately to ISIC Rev.1. This is the base for the estimates for 1992 and 1993. The depreciation rates were increased by the book-keeping law, for example from 1 to 2.5 per cent for buildings. The new methodology increased the total CFC more than three times. These revisions have increased the output and value added of government services.

The accounting of changes in inventories of material purchased by government institutions has been changed because since 1992 the book-keeping of these institutions is based on the cash principle instead of the previous accrual principle.

Table 3.10.1 shows the differences between the estimates of total output of government services according to the 1989-91 HNA and the New HNA, and Table 3.10.2 the differences in the non-market output of government.

In the course of compiling the 1994 national accounts in 1996, some NPISHs were reclassified to the government sector for the years 1993 and 1994, because they were mainly financed by the government. This slightly increased output and valued added of government for 1993 compared to the 1995 exercise, by 1.2 and 0.4 billion HUF respectively.
Table 3.10.1 Government market and non-market output, 1991

<table>
<thead>
<tr>
<th>Output</th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Billion HUF</td>
<td></td>
</tr>
<tr>
<td>Output of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- NPIs</td>
<td>24.6</td>
<td>--</td>
</tr>
<tr>
<td>- Capital repairs</td>
<td>20.9</td>
<td>--</td>
</tr>
<tr>
<td>- Maintenance of long-life assets (roads, etc.)</td>
<td>--</td>
<td>1.0</td>
</tr>
<tr>
<td>- Changes in inventories of purchased materials</td>
<td>--</td>
<td>5.6</td>
</tr>
<tr>
<td>- CFC of state owned dwellings</td>
<td>--</td>
<td>13.2</td>
</tr>
<tr>
<td>- New estimates of CFC (excluding state-owned dwellings)</td>
<td>14.2</td>
<td>105.6</td>
</tr>
<tr>
<td>- Operating surplus of the government sector on market activities</td>
<td>6.3</td>
<td>--</td>
</tr>
<tr>
<td>- Interest and insurance paid</td>
<td>1.9</td>
<td>--</td>
</tr>
<tr>
<td>Intermediate consumption</td>
<td>227.8</td>
<td>197.8</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- NPIs</td>
<td>15.7</td>
<td>--</td>
</tr>
<tr>
<td>- Capital repairs</td>
<td>20.9</td>
<td>--</td>
</tr>
<tr>
<td>- Maintenance of long-life assets (roads, etc.)</td>
<td>--</td>
<td>1.0</td>
</tr>
<tr>
<td>- Changes in inventories of purchased materials</td>
<td>--</td>
<td>5.6</td>
</tr>
<tr>
<td>Value added</td>
<td>348.3</td>
<td>435.8</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- NPIs</td>
<td>8.9</td>
<td>--</td>
</tr>
<tr>
<td>- CFC of state owned dwellings</td>
<td>--</td>
<td>13.2</td>
</tr>
<tr>
<td>- Estimates of CFC (excluding state-owned dwellings)</td>
<td>14.2</td>
<td>105.6</td>
</tr>
<tr>
<td>- Operating surplus of the government sector on market activities</td>
<td>6.3</td>
<td>--</td>
</tr>
<tr>
<td>- Interest and insurance paid</td>
<td>1.9</td>
<td>--</td>
</tr>
</tbody>
</table>

Table 3.10.2 Government non-market output, 1991

<table>
<thead>
<tr>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Billion HUF</td>
</tr>
<tr>
<td>1. Government market and non-market output</td>
<td>576.1</td>
</tr>
<tr>
<td>2. Market output and incidental sales, 1989-91 HNA</td>
<td>106.4</td>
</tr>
<tr>
<td><strong>Minus:</strong></td>
<td></td>
</tr>
<tr>
<td>i Market output of NPIs classified to other sectors</td>
<td>13.5</td>
</tr>
<tr>
<td>ii Operating surplus of market activities</td>
<td>6.3</td>
</tr>
<tr>
<td>iii Changes due to a new book-keeping system and industrial classification</td>
<td>21.6</td>
</tr>
<tr>
<td><strong>Plus:</strong></td>
<td></td>
</tr>
<tr>
<td>iv Fees</td>
<td>--</td>
</tr>
<tr>
<td>3. Incidental sales, New HNA (2-i-ii-iii-iv)</td>
<td>--</td>
</tr>
<tr>
<td><strong>4. Government non-market output (1-2) respectively (1-3)</strong></td>
<td>469.7</td>
</tr>
</tbody>
</table>
Private health services

Honoraria paid for certain government health services which in principle are free of charge, have been included as output and valued added of private health services. According to the household budget survey, they amounted to 3 billion HUF in 1991.

Net taxes on products

The definition of net taxes on products has changed compared to the 1989-91 HNA. Taxes on exports are now recorded as taxes on products. VAT includes non-deductible VAT on gross fixed capital formation, which in the 1989-91 HNA was recorded as income taxes by enterprises, but in the New HNA is correctly recorded as taxes on products. In the 1989-91 HNA, only VAT for 1991 on dwellings was treated as taxes on products. This explains the increase of VAT in 1991 by 8.5 billion HUF between the 1989-91 HNA and the New HNA. Customs duties now also cover customs duties on cars imported by private persons, an amount of 0.5 billion HUF in 1991. This item was included in household consumption expenditure in the 1989-91 HNA but not recorded as taxes on products. Profits of fiscal monopolies are treated as other taxes on products in the New HNA. Other taxes on products also cover taxes on gambling, taxes on tourism and taxes on certain cultural products. Moreover, the data source for excise duties has changed. In the 1989-91 HNA the corporate sector’s tax declarations were used. In the New HNA, the general government budget is used as data source.

Subsidies on agricultural exports are no longer treated as other subsidies on production but as subsidies on products. On the other hand, reimbursements of medicine by social security and subsidies by government to public transport companies on monthly tickets for students and pensioners are treated as social transfers in kind and not as subsidies on products in the New HNA. The latter item should be treated as subsidies on products according to the 1993 SNA but as the subsidy responds to a social need the former solution was adopted. Subsidies to cover general losses of public transport enterprises are still treated as other subsidies on production.

The effects of these changes on the estimates for 1991 are shown in Table 3.11.

Table 3.11. Net taxes on products, 1991

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Taxes on products, total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- VAT</td>
<td>144.4</td>
<td>152.9</td>
</tr>
<tr>
<td>- Customs duties</td>
<td>65.0</td>
<td>65.5</td>
</tr>
<tr>
<td>- Excise duties</td>
<td>139.4</td>
<td>145.6</td>
</tr>
<tr>
<td>- Other taxes on products</td>
<td>9.6</td>
<td>16.9</td>
</tr>
<tr>
<td><strong>2. Subsidies on products, total</strong></td>
<td>89.3</td>
<td>73.8</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Subsidies on imports</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>- Subsidies on agricultural exports</td>
<td>--</td>
<td>34.9</td>
</tr>
<tr>
<td>- Subsidies on domestic products</td>
<td>88.9</td>
<td>38.7</td>
</tr>
<tr>
<td><strong>3. Net taxes on products (1-2)</strong></td>
<td>269.2</td>
<td>307.1</td>
</tr>
</tbody>
</table>
In the national accounts compilations undertaken during 1996, the treatment of the special fees on purchases of real estate was changed. They are now treated as taxes on products. Previously they were treated as other taxes on production in the case of enterprises and as income tax in the case of households. On the use side the value is included in gross fixed capital formation. The total value of taxes on products for 1993 increased from 521.5 to 530.4 billion HUF as a result of this charge.

Underground or informal economy

Estimates concerning illegal transactions are not included in either the 1989-91 HNA or the New HNA. However estimates are made of activities which are concealed, for example for tax evasion purposes or to avoid paying social security contributions. Concealment by not answering questionnaires is treated as non-response and corrected by standard statistical methods, although this is sometimes difficult. Corrections are also made for careless reporting, to improve the quality of the original data, and for deliberate under-reporting, to improve the reliability of the data.

Small unincorporated enterprises below a certain threshold (for example in agriculture in 1994, less than 1 million forints annual turnover) are exempt from registration and from declaring their income. Information concerning their activities is therefore not available from the administrative sources used in the HNA. No special estimates are made for the underground or informal economy as such, but HCSO is making estimates of all transactions as exhaustively as possible. The methods used for estimating the following activities cover underground/informal activities of unregistered units.

Agriculture

The informal economy in agriculture is covered by the commodity flow method used to estimate the output of this branch. Additionally the data are broken down by sectors. Agricultural activities of non-financial corporations are included as output of main or secondary activities of the sector. Market and non-market output and value added of small agricultural units are recorded in the household sector. The methods of estimation do not differentiate between registered, regular but not registered, and concealed production.

Construction of dwellings

The methods used in estimating construction of dwellings also cover underground activities of unregistered units. In the case of construction of dwellings the estimates are based on number of permissions to start construction and number of permits for finished new dwellings, which are known from the local government. Unlicensed constructions are rare. The average size and quality of dwellings are also known. However, building plans can be changed without permission.

Letting of dwellings to tourists

Letting of dwellings to tourists is partly organised through tourist agencies, partly directly by households. Income from the former is known from the tourist agencies. Estimates of income from the latter are based on expert estimates using information from travel agencies on registered tourists, bed nights and receipts.
Underreporting of quasi-corporations and unincorporated enterprises

The HNA includes estimates for under-reporting that is considered deliberate by registered quasi-corporations and unincorporated enterprises. Quasi-corporations cover unincorporated partnerships and sole proprietors with cash accounting but which submit corporation tax declarations. Only intermediate consumption is adjusted (downwards for these enterprises). The output figures derived from the tax declarations have proved to be satisfactory. It is assumed that the production of quasi-corporations has a lower ratio of intermediate consumption to output than that of corporations. It is assumed to be 70 per cent of the intermediate consumption/output ratio of incorporated enterprises. The corrections are made at the level of 60 divisions.

Unincorporated enterprises are all sole proprietors which have not been classified as quasi-corporations. Registered units are those which prove their existence by declaring any income to the tax authorities. The number of units in the business register is higher but it is assumed that the unincorporated enterprises not found by tax authorities in effect do not exist. Between 65 to 70 per cent of the units in the tax register are accounted for in the HNA. These units are classified in the tax register according to kind of job which can be converted to the TEAOR 92 at the 60 division level. It is assumed that on average a sole proprietor with employees performs only one job per unincorporated enterprise. Some unincorporated enterprises may have employees while in others the own-account workers or self employed work only part time.

For these registered unincorporated enterprises, both output and intermediate consumption are adjusted. Because of the low quality of the data, the output per employee is substituted by corresponding data derived for incorporated enterprises with two employees and with 0-20 million forints annual turnover in 1991-92; 0-25 million forints in 1993. For 1994, however, the average ratio of all incorporated enterprises in the branch concerned was used as reference due to the deterioration of the quality of the data in the previous reference group. Their intermediate consumption/output ratio is assumed to be 65 per cent of reference incorporated enterprises. It is an expert estimate based on the assumption that incorporated enterprises work with higher overhead costs, such as offices instead of working at home, purchased bookkeeping services etc. They might also overreport costs (cf. below). As for quasi corporations, the corrections for unincorporated enterprises are made at the level of the 60 divisions of the industrial classification.

Future work

There are three more areas which HCSO intends to cover with regard to underground/informal economy. The first is corrections for biases and over/underreporting of corporations. The book-keeping law allows different treatment of certain costs of production from that recommend in the national accounts and the tax law does not explicitly forbid that items intended for final consumption be recorded as intermediate consumption. HCSO has set up a project to get detailed information on the structure of intermediate consumption, partly through personal interviews. The larger enterprises will be surveyed first.

The second area concerns registered enterprises carrying out economic activities which, due to different reasons (deliberate or accidental), do not provide any data to the tax office. The third area is the unregistered legal production, which will be the major part of the future investigations concerning the underground economy. It will probably be based on the Italian method of accounting for the total labour supply and use. The information provided by population censuses, household labour force surveys,
enterprise surveys on labour force and wages and salaries, and corporation tax declarations should allow the estimation of the total labour resources and total use in registered enterprises by industries. The excess of use over resources will be assumed to relate to irregular workers or double workers. By these means the non-registered labour input in non-registered enterprises and related output and value added can be estimated using per capita output and value added of corresponding registered enterprises.
APPENDIX 3.1

Holding gains and losses on inventories in the New HNA

Introduction

In the past data on inventories were available only annually. Changes in inventories were estimated from book-keeping data on opening and closing stocks. No adjustment for holding gains and losses was made in order not to deviate from the accounting rules used in business accounts. Before the early 1990s, this might not have distorted GDP to a great extent because inflation was very low. However, at the beginning of the 1990s the rate of inflation increased rapidly in Hungary and the level of GDP could have been overestimated because of holding gains included in the estimates of changes in inventories. It therefore became urgent to eliminate the holding gains from the book-keeping data even if the corrections were approximate.

At the same time the quality of the data sources for national accounts deteriorated due to changes in the book-keeping system which were so profound that they impeded correct estimates of changes in inventories. The process of privatisation also contributed to the difficulties. Many enterprises have revalued, in most cases downward, their inventories. The HCSO could not obtain any reliable data either on stock levels or on the size of the revaluation. It was therefore impossible to estimate the size of holding gains and losses and volume changes in assets due to revaluation and separate them from other statistical discrepancies and errors.

After initial difficulties, the business accounting has consolidated and has therefore improved as a data source for the HNA. It is hoped that it can now supply data on stock levels, at least for the large corporations, not only annually after closing the business year, but also quarterly.

Inventory survey

In 1994, HCSO introduced a survey on inventories. The sample covers all corporations with over 50 employees (5 200-5 300 enterprises) classified to the following ISIC industry categories:

C. mining and quarrying;
D. manufacturing;
E. electricity, gas and water supply;
F. construction;
G. wholesale and retail trade; and
I. transport and storage (Only TEAOR 92 class 6342 Storage and warehousing is covered).

Agricultural stocks are covered by a survey conducted twice a year by the Ministry of Agriculture.
Most HCSO statistics cover the enterprises included in the inventory survey and it is expected that after an introductory period a fairly good response rate can be achieved. It is assumed that these large enterprises keep records on inventories at least on a quarterly basis to be able to follow the accounting and financial position during the year.

The survey asks for the level of closing and opening stocks of own-produced goods, goods purchased for intermediate consumption and goods purchased for resale. Corrections for non-response are made and the sample is grossed up for the small enterprises not covered by the sample.

**Estimation of stock levels**

Substitution of missing data and the grossing up of the sample is made using the velocity of turnover of the inventories. It is assumed that the velocity of turnover of the inventories (that is the inverse of the length of time goods are held in stocks) is characteristic for the industry concerned, but that it may change from quarter to quarter because of changes in the short-term business cycle. In each quarter the average velocity of turnover of inventories, observed in the enterprises which responded to the survey at the two-digit level of the industrial break-down, is used to estimate the missing data and to gross up the sample.

The velocity of turnover of inventories is expressed by the number of turnovers within the quarter, as follows:

- Number of turnovers = Value of quarterly sales/Average inventory levels.

This ratio is used to estimate the level of inventories in enterprises not covered by the survey using data on sales derived from other statistics, i.e. the quarterly VAT declarations. The calculations are made

- at the level of individual enterprises for non-response in the quarter, called substitution; and
- at the two-digit level of the industrial classification for enterprises not covered by the survey, called grossing up.

This kind of estimation is made every quarter and separately for

- inventories of own produced goods;
- purchased materials; and
- goods purchased for resale.

In each quarter the opening level of stocks is known, i.e. either as reported or as the level of the closing stock of the previous quarter. If the level of the closing stock of the current quarter is missing, it can be estimated using the velocity of turnover and the quarterly sales data from the VAT declarations. At the end of the year the results derived from the quarterly estimates can be compared with the inventory data derived from the annual corporation tax declarations to validate the method. If there are big differences in the stock levels, the method can be revised.
Adjustment for holding gains or losses

Current price GDP will be adjusted for holding gains or losses for the years 1994 and 1995 and onwards. For the years 1991-93 the downward revaluation of inventories due to the new book-keeping system and privatisation cannot be separated from other changes in inventories to be properly recorded as changes in volume of assets. The estimation will be done each quarter at the two-digit level of ISIC Rev. 3. The holding gains by quarters will add up to the annual holding gains.

The calculations will be made in the following steps:

-- Average length of holding time is the inverse of the velocity of inventory turnover. Assuming that enterprises apply FIFO accounting rules, the closing stocks on inventories are valued at the price level of the month of the end of the quarter minus the average length of holding time.

-- The opening and closing stocks are revalued to the same price level. For deflation monthly producer price indices are used. In order to deflate purchased materials, data on the composition of intermediate consumption are needed. They are obtained from a special survey of enterprises with more than 300 employees, organised for compiling annual input-output tables. The ratios derived from this survey are used as weights for the price changes of products used as intermediate consumption in various industries. The same price indices are used to deflate intermediate consumption of goods.

-- Changes of inventories are derived as the difference between the two revalued stock levels inflated to the average price level of the current quarter by multiplying them by the monthly producer price indices or deflated to the average prices of the base year depending on which estimate is calculated first. This is the value recorded as changes in inventories on the goods and services account and the capital account. The difference between the original book value changes in inventories and the value of the book-keeping changes on inventories is the holding gain or loss. The holding gains or losses on inventories of own-produced goods and goods purchased for resale are subtracted from the value of output, and those on inventories of purchased materials are added to intermediate consumption. Holding gains and losses on all inventories are of course also eliminated from changes in inventories in the capital account.
APPENDIX 3.2

The Accounting of Insurance in the New HNA

Before 1991, insurance services were treated as non-market production. The output was valued at cost and its use recorded as government consumption.

After the revision, the New HNA follows the recommendation of the 1993 SNA as closely as possible but the quality of the estimates is influenced by the availability of the data. The majority of the insurance companies provide various types of insurance services but in their business accounting they do not separate all transactions referring to life and non-life insurance or reinsurance. Transactions related to privately funded pension schemes organised by the insurance corporations cannot be separated from other life-insurance transactions in the HNA. The activities of autonomous pension funds may become significant and they will be recorded in the New HNA in the future. The recording of reinsurance may affect mostly the rest of the world account, but for the time being the value of these transactions is not significant and the distortion caused by not recording them separately is thought to be slight.

The New HNA records the output of the insurance services on an accrual basis, and prepaid premiums are subtracted from premiums actually received in the accounting period. Similarly claims actually paid are corrected by the changes in reserves for unsettled claims. Premiums received by the insurance companies do not include returns on damages (e.g. the sales revenue of heavily damaged cars) and accordingly claims paid are decreased by this amount. When valuing the output of insurance services, the changes in the actuarial reserves of life insurance and income received on invested reserves are also taken into consideration. The major data source is the annual report of the Insurance Supervision Authority.

Intermediate consumption of insurance corporations is estimated in a manner similar to that for non-financial enterprises, namely using the cost data derived from the corporation tax declarations. In addition the financial reports of the insurance companies are used.

The estimation of output and gross value added is illustrated by the data for the year 1993 in Table 3.12.1.

In order to divide the output between life insurance and non-life insurance, the following assumptions are made. Data concerning premiums and claims are available separately for each type of insurance. All changes in actuarial reserves are recorded in the New HNA as part of the premiums of life insurance. All prepaid premiums and reserves for unsettled claims are accounted as related to non-life insurance. In the future, if data sources permit, prepaid premiums and reserves for unsettled claims should be split between life and non-life insurance. Income on invested reserves are divided between life and non-life insurance according to the level of the reserves. The allocation of output is illustrated by Table 3.12.2.
Table 3.12.1. **Output and gross value added 1993**

<table>
<thead>
<tr>
<th>Description</th>
<th>Billion HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Premiums received, total</td>
<td>73.3</td>
</tr>
<tr>
<td>2. Prepaid premiums</td>
<td>1.2</td>
</tr>
<tr>
<td>3. Property income</td>
<td>7.3</td>
</tr>
<tr>
<td>4. Claims paid, total</td>
<td>38.8</td>
</tr>
<tr>
<td>5. Changes in reserves for unsettled claims</td>
<td>9.0</td>
</tr>
<tr>
<td>6. Changes in actuarial reserves</td>
<td>7.3</td>
</tr>
<tr>
<td><strong>7. Output (1-2-3-4-5-6)</strong></td>
<td><strong>24.4</strong></td>
</tr>
<tr>
<td>8. Intermediate consumption</td>
<td>10.7</td>
</tr>
<tr>
<td>9. Gross value added (7-8)</td>
<td><strong>13.6</strong></td>
</tr>
</tbody>
</table>

Table 3.12.2. **The accounting of insurance in the New HNA, 1993**

<table>
<thead>
<tr>
<th>Description</th>
<th>Non-life insurance</th>
<th>Life Insurance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-financial and financial corporations</td>
<td>Household sector</td>
<td>General Government</td>
</tr>
<tr>
<td>1. Premiums gross</td>
<td>18.8</td>
<td>40.3</td>
<td>1.6</td>
</tr>
<tr>
<td>2. Prepaid premiums</td>
<td>0.4</td>
<td>0.8</td>
<td>0.0</td>
</tr>
<tr>
<td>3. Property income</td>
<td>0.8</td>
<td>1.5</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Claims payable</td>
<td>10.7</td>
<td>23.1</td>
<td>0.5</td>
</tr>
<tr>
<td>5. Changes in the reserves for unsettled claims</td>
<td>3.0</td>
<td>6.0</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Changes in actuarial reserves</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7. Imputed output of insurance services (1-2+3-4-5-6)</td>
<td>5.5</td>
<td>11.9</td>
<td>1.1</td>
</tr>
<tr>
<td>8. Premiums, net (1-2+3-7)</td>
<td>13.7</td>
<td>29.1</td>
<td>0.5</td>
</tr>
<tr>
<td>9. Claims due (4+5)</td>
<td>13.7</td>
<td>29.1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

n.a. = not applicable in the national accounts

Insurance services provided to households are included in households consumption expenditure. Non-life insurance services provided to all other sectors are recorded as intermediate consumption.

Property income on both life and non-life insurance reserves allocated to insurance policy-holders is recorded on the allocation of primary income accounts. On the secondary distribution of income accounts property income on non-life insurance reserves is included as premium supplements in the non-life insurance premiums paid to insurance corporations.

Life insurance premiums and claims are not recorded explicitly in the secondary distribution of income accounts, and the balance of them is included in the savings of households.

In the case of non-life insurance, premiums less the service change balance claims for the total economy, because the transactions affect only the income distribution between the sectors of the national economy. According to the Insurance Supervisory Agency, the insurance transactions with the rest of the world concern mostly reinsurance. Net insurance transactions with the rest of the world totalled -2 billion HUF in 1993. For the moment, this figure cannot be reconciled with BoP data, which are rather different. In the New HNA, which uses the Insurance Supervisory Agency data, the levels of gross insurance...
transactions with the rest of the world are much higher than the corresponding BoP data, while the balance of the transactions is only half of that shown in the BoP statistics.
CHAPTER 4 GDP BY EXPENDITURE

Final consumption

In the New HNA and in accordance with the SNA 1993, two concepts of final consumption are used; the first focuses on the expenditure on goods and services for final consumption; the second refers to actual final consumption. As in the 1989-91 HNA, the New HNA focuses on the latter concept. For household consumption a third concept was also used previously, consumption expenditure in cash.

Individual consumption

Individual consumption covers final consumption expenditure of households and individual consumption expenditure of general government and NPIHSs, social transfers in kind.

Household consumption is classified into groups of goods and services using two different classifications:

-- By expenditure groups, seven headings at the most aggregated level:
  1. food,
  2. beverages, tobacco,
  3. clothing articles,
  4. fuel and power,
  5. consumer durables,
  6. other industrial goods,
  7. services.

-- By purpose of expenditure, eleven headings at the aggregate level; this classification is closer to the SNA classification but it has significant differences both with regard to headings distinguished and to their content. The eleven headings are:
  1. food;
  2. beverages coffee, tea;
  3. tobacco;
  4. clothing;
  5. housing services;
  6. fuel and power;
  7. household equipment;
  8. health and personal care;
  9. transport and communication;
  10. education, culture, sport and recreation; and
  11. other household consumption (jewellery, precious metals, watches, gambling, services provided by social institutions, hotels, etc.).
These classifications were also used in the 1989-91 HNA but some changes in their application have been introduced. Previously food, beverages, clothing consumed in hospitals, recreation homes and kindergartens were recorded as food, beverages and clothing but in the New HNA they are recorded under the services to which they are linked.

In the future, the classification of household goods and services will be adjusted to that recommended by SNA, the classification of individual consumption by purpose (COICOP).

The breakdown of actual household consumption is shown in Annex tables 5.3.1-2. The changes in the coverage of household consumption are discussed below.

**Final consumption expenditure of households**

Final consumption expenditure of households in the New HNA refers to consumption of resident households and not to consumption on the domestic territory as in the 1989-91 HNA, although this adjustment can only be made in aggregate and not at the level of individual items. Net household expenditures abroad are estimated by the balance of purchases of foreign currencies by Hungarian resident private persons and of Hungarian forints by non-residents. As foreign exchange for business was already liberalised in the early 1990s, purchases of currencies for business purposes were not mixed with those of households. On the other hand, purchases of forints by non-residents cannot be divided between those for business and those for private tourist purposes.

As in the 1989-91 HNA, final consumption expenditures of households are mainly estimated from the income side. Total final consumption expenditure is derived as the difference between disposable income of households and saving. For the estimation of saving see Chapter 6. The structure of household consumption expenditure is based mainly on information from two sources, retail trade surveys and household budget surveys, although some other sources are also used.

The retail trade statistics were completely reorganised in 1991 to adjust them to the requirements of a market economy. The reorganisation changed the technique of data collection and processing by turning it into a direct mail survey of retailers. The detailed commodity breakdown proved to be seriously biased and has not been published for the years 1991-1994. The reliability of the overall estimates is also questionable even though great efforts were made with the assistance of Statistics Canada to improve the quality of the monthly retail survey. These were the main reasons for incorporating the household budget survey (HBS) in the national accounts estimates.

To estimate the structure of household consumption expenditure, the HBS is the primary data source. Before using the data for national account purposes, some adjustments and corrections are needed because HBS in general serves different aims and is usually not designed for macro estimates.

The first adjustment is the demographic correction which eliminates the misrepresentation of active and inactive households in the actual sample. The correction is based on the 1990 population census data. For 1991 and 1992 a similar correction was made by the National Accounts Department. Since 1993 this correction has been incorporated in the HBS data processing phase, so it is reflected in the publication of the survey data as well. The current adjustment applies the age-distribution of the population by counties and is made by the department responsible for the survey.

The second type of adjustment is related to income distribution and has until recently been made by the National Accounts Department. In the HBS, high income households are under-represented while low income groups are over-represented due to the different patterns of non-response. To obtain
information on income distribution of households, special household income surveys were carried out every fifth year by the HCSO. The last survey referred to 1987 and covered 95 per cent of household income in the national accounts. These data were updated year by year until 1992 using microsimulation techniques. Since then, the 1992 distribution level is simply extrapolated by income decile using the same total annual nominal household income growth. The original survey data were reweighted using the decile income distribution of the simulated dataset. As a result of this procedure, the overall level of consumption expenditure increased by almost 50 per cent. A great dispersion could be observed among the different commodity groups of consumption. Items with low income-elasticity, such as food, increased by only 12 per cent, while items with high income-elasticity such as consumer durables and services, increased by more than 70 per cent.

In addition, individual corrections are also needed for items such as beverages and tobacco which are under-reported in household surveys as well as for those items where other data sources, such as retail survey, input-output data, administrative data, prove to be more reliable than the HBS.

The retail trade survey provides data on total trade and a breakdown by retail trade branches. A detailed commodity breakdown will be available from the retail trade census only in 1996 (referring to 1995). From 1 January 1995, the quarterly retail trade survey provides a commodity breakdown by 10 commodity groups.

With the foreseen improvements in HBS and retail trade surveys, the estimates of household consumption expenditure will improve.

Compared with the 1989-91 HNA, the main changes in household final consumption expenditure concern housing, financial and insurance services and net expenditure abroad by resident Hungarians.

The change in household consumption expenditure on housing services reflects the change in the measurement of output of market government housing services and housing services of owner occupied dwellings described in the previous chapter. The imputed rent of owner-occupied dwellings was increased for 1991 from 56.5 billion HUF in the 1989-91 HNA to 139.8 billion HUF in the New HNA. The breakdown of non-market and market government housing services is described in Chapter 3.

In the New HNA, final consumption expenditure of households includes fees and commissions for financial services. It also includes imputed service charges for life and non-life insurance, measured as described in Appendix 3.2. Fees and commissions amounted to 2.8 billion HUF and the imputed insurance service charge to 1.2 billion HUF in 1991.

In the New HNA, consumption expenditure excludes outlays on major renovations of dwellings, which were included in the 1989-91 HNA in the imputed rent of owner-occupied dwellings. These outlays are now treated as gross fixed capital formation.

In the 1989-91 HNA, wages and salaries in kind covered only items such as beer or coal provided free of charge to employees in breweries and coal mines. It now also includes social services provided free of charge or at nominal prices by employers to their employees. In the 1989-91 HNA, these were included in the final consumption expenditure of enterprises and in social transfers in kind.

Certain taxes and fees paid to government which are now treated as incidental sales are also included in household consumption expenditure. Examples are passport fees, fees paid to courts etc.

Membership fees paid to various associations are recorded as transfers in the New HNA, as recommended by the SNA, rather than as consumption expenditure.
Incidental sales by NPISHs to households of 8.5 billion HUF in 1991 is assumed to be already covered by the household budget survey and therefore included implicitly in household consumption expenditure. This item increased to 24.1 Billion HUF in 1993.

Table 4.1. Household Consumption expenditure, 1991

<table>
<thead>
<tr>
<th>Household consumption expenditure in 1989-91 HNA</th>
<th>Billion HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1989-91 HNA</strong></td>
<td>1 303.8</td>
</tr>
<tr>
<td><strong>New HNA</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Plus:</strong></td>
<td></td>
</tr>
<tr>
<td>- Net household expenditure abroad</td>
<td>--    - 37.3</td>
</tr>
<tr>
<td>- Financial services</td>
<td>--    2.8</td>
</tr>
<tr>
<td>- Insurance services</td>
<td>--    1.2</td>
</tr>
<tr>
<td><strong>Changes in estimation methods on data sources</strong></td>
<td></td>
</tr>
<tr>
<td>- Wages and salaries in kind</td>
<td>1.0    13.6</td>
</tr>
<tr>
<td><em>of which:</em> Those previously treated as social benefits in kind by enterprises</td>
<td>--    10.7</td>
</tr>
<tr>
<td>- Actual rents of dwellings</td>
<td>11.7    6.3</td>
</tr>
<tr>
<td>- Imputed rent of owner-occupied dwellings</td>
<td>56.5    139.8</td>
</tr>
<tr>
<td><em>of which:</em> capital repairs</td>
<td>15.6    --</td>
</tr>
<tr>
<td>- Loto, gambling, etc.</td>
<td>9.8    8.0</td>
</tr>
<tr>
<td>- NPIs Membership fees</td>
<td>6.6    --</td>
</tr>
<tr>
<td>- Fees to government</td>
<td>1.5    --</td>
</tr>
<tr>
<td><strong>Household consumption expenditure in the New HNA</strong></td>
<td></td>
</tr>
<tr>
<td>--</td>
<td>1 354.1</td>
</tr>
</tbody>
</table>

Social transfers in kind

Social transfers in kind include:

- output of services, such as housing, education (including all education in military schools), health (including military health services) and social and cultural services, produced by government free of charge or at minimal prices and provided to households;
- government expenditure on medicine and other pharmaceutical products and local public transport of students and pensioners; and
- consumption expenditure of non-profit institutions serving households (NPISHs).

Output of individual services produced by government and provided to households free of charge or at prices which are not economically significant are based on the production estimates (see Chapter 3). It has been extended in the New HNA to include housing services of local government. Consumption of fixed capital (CFC) of local government owned dwellings was included in government consumption expenditure and in social transfers in kind in the 1989-91 HNA, but not in the output of government services. As described in the previous chapter, CFC is still included in government consumption expenditure and in social transfers in kind, but the estimation method has been revised. The change in other social transfers in kind from general government between the 1989-91 HNA and the New HNA shown in Table 4.2 is due the treatment of all market output of government units as incidental sales and excluding any operating surplus. For 1991, incidental sales in activities included in individual services was revised downwards in line with the structure of sales and other revenue in 1992.

The 1989-91 HNA recorded government subsidies on medicine and reimbursements by government to public transport enterprises of tickets at reduced rates for students and pensioners as
subsidies on products. The New HNA includes them in government consumption expenditure and social transfers in kind.

In the 1989-91 HNA, consumption expenditure of NPISHs measured as the sum of costs was included in government consumption expenditure as collective consumption, except in a few cases, such as schools and hospitals run by religious organisations which were treated as actual individual consumption. They are now all treated as actual individual consumption. The estimate is based on the production of these services, minus the sales of market services.

The effects of the changes to social transfers in kind in the New HNA are shown in Table 4.2.

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure on pharmaceutical products</td>
<td>--</td>
<td>39.4</td>
</tr>
<tr>
<td>Expenditure on transport</td>
<td>--</td>
<td>13.8</td>
</tr>
<tr>
<td>Other social transfers in kind:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Individual services produced by government</td>
<td>288.8</td>
<td>323.3</td>
</tr>
<tr>
<td>of which: Housing services (i.e. CFC of state owned dwellings)</td>
<td>--</td>
<td>13.2</td>
</tr>
<tr>
<td>Effects of new estimation methods</td>
<td>--</td>
<td>21.6</td>
</tr>
<tr>
<td>- CFC of state owned dwellings</td>
<td>2.2</td>
<td>--</td>
</tr>
<tr>
<td>- Individual services of NPISHs</td>
<td>--</td>
<td>16.1</td>
</tr>
<tr>
<td>- Enterprise welfare services</td>
<td>10.7</td>
<td>--</td>
</tr>
<tr>
<td>Total social transfers in kind</td>
<td>301.7</td>
<td>392.9</td>
</tr>
</tbody>
</table>

In the HNA compilations made during 1996, the sample of NPISHs was grossed up for non-response based on the register of the NPIs. This increased the output in 1993 by 30.8 billion HUF. At the same time incidental sales were increased by 15.9 billion to 24.1 billion HUF and certain NPISHs was reclassified back to the government sector. The net effect of the reclassification on social transfers in kind is nil.

Collective consumption

In the 1989-91 HNA, financial institutions (banks and insurance companies) were considered non-market producers although they were included in the enterprise sector. Their output was measured as the sum of costs, and included in collective consumption. In the New HNA, these institutions are market producers and only actual banking fees and commissions paid by government are included. When the government subscribes to non-life insurance policies, an imputed insurance service charge is also allocated to general government and included in government consumption expenditure. As mentioned above consumption expenditure of NPISHs is excluded from government and shown separately.

As in the past, government consumption expenditure for collective purposes is estimated at cost, including consumption of fixed capital (CFC), minus sales of services at prices which are not economically significant. The fixed assets for which CFC is calculated have been extended to cover assets such as roads, bridges and military assets which can be used for civilian purposes, etc. The CFC is no longer based on historic costs but on preliminary estimates of replacements costs in both current and constant prices as described in Chapter 3.
Collective consumption expenditure presently includes purchases of certain goods and services for collective consumption without any transformation, that is they have not been treated as intermediate consumption in a production process, but recorded directly in the use of income account of government. They concern street lighting and some other services financed from extrabudgetary funds. The coverage has increased in the New HNA compared to the 1989-91 HNA. Collective consumption expenditure is therefore somewhat higher than the corresponding production of collective services. These purchases will in the future be treated as intermediate consumption of government.

The derivation of collective consumption according the 1989-91 HNA and the New HNA is shown below. The differences between the two systems for the output of government services have been described in Chapter 3 and those related to social transfers in kind in the preceding paragraphs.

During the revision of the government accounts, the coverage and estimation method of incidental sales was reviewed. Data are obtained from the reports of government institutions.

<table>
<thead>
<tr>
<th>Table 4.3. Collective consumption, 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billion HUF</td>
</tr>
<tr>
<td>1989-91 HNA</td>
</tr>
<tr>
<td>1. Government non-market output</td>
</tr>
<tr>
<td>2. Output of individual services</td>
</tr>
<tr>
<td>3. Output of collective services (1-2)</td>
</tr>
<tr>
<td>Plus:</td>
</tr>
<tr>
<td>4. Output of financial services</td>
</tr>
<tr>
<td>5. Street lighting and some other purchased services</td>
</tr>
<tr>
<td>6. Total collective consumption</td>
</tr>
</tbody>
</table>

For 1993 and 1994, a significant amount of military equipment imported from the Russian Federation is included in government consumption expenditure. This conforms with the SNA. The equipment has been imported in settlement of previous Hungarian loans to Russia.

**Gross fixed capital formation**

The coverage of gross fixed capital formation (GFCF), the main component of which is purchase of fixed assets, has been extended to cover capital repairs, non-deductible VAT and fees paid on purchases of real estate. In the 1989-91 HNA acquisition of fixed assets through financial leasing and transfers in kind mostly from abroad were included in the total GFCF but not distributed by branches.

The main data source for estimates of GFCF are the annual and quarterly investment surveys. The annual survey covers all enterprises with more than 10 employees, all central and local government units and NPIs which have a tax number. The quarterly questionnaire is sent to all units with more than 50 employees and those with between 10-50 employees if they have indicated in a pre-survey that they will have investment of over 1 million HUF the following year. From 1996 the threshold is 10 million HUF. Up to 1995 about 22,000 units were over the limit; the new limit will decrease the number of units to between 10,000 and 12,000. In the case of smaller enterprises, administrative data sources, such as the VAT declarations, are used to estimate their GFCF. Up to 1994, the survey provides data on purchases of new assets only. With the new book-keeping system introduced in 1992, the coverage of purchases of new assets was defined more in line with 1993 SNA recommendations. This revision has been extrapolated back to 1991 and explains the difference for 1991 between these purchases.
according to the 1989-91 HNA and the New HNA. At the same time there was a reclassification of units between units with legal entity and those without.

Purchases of new fixed assets are compiled by kind of activity, while acquisition of assets through financial leasing and capital transfers in kind is recorded only as a total for the whole economy although the compilation by kind of activity would be possible since the same investment survey is used. Until now it has been assumed that at the level of the total economy, the sales and purchases of used assets balance each other and that there are no exports of used assets. From the beginning of 1995, the investment survey also covers intangible assets, and sales and purchases of used assets. For assets acquired through barter, current market values are requested.

It should be noted that the estimation methodology for GFCF in housing has changed which has increased its value. This relates mostly to the capital repairs of owner occupied dwellings and to purchases and sales of new and existing dwellings which were not treated consistently in the 1989-91 HNA. The change in the estimation method also reflects the privatisation process of government owned dwellings (see Chapter 6, Appendix 6.1. Recording of privatisation in the New HNA). The privatisation of dwellings influences the distribution of GFCF by sectors, but not the overall estimate. While the methodology for construction of new dwellings has not basically changed, the estimates reflect a shift to a higher share of own-account construction of dwellings than in the past, from 73 per cent in 1991 to 88 per cent in 1994. This has decreased the average value of dwellings in current and constant prices because it is has been observed that the cost of own-account constructed dwelling is lower than the construction value of dwellings offered for sale by professional dwelling constructors which includes an element of operating surplus.

Semi-fixed assets with a value of under 20,000 HUF are included in intermediate consumption.

Outlays on agricultural plantations (9.7 billion HUF in 1991) are included in GFCF in both 1989-91 HNA and the New HNA. However, in the 1989-91 HNA they were not included in the stock of fixed assets which will be corrected in the future capital stock estimates of Hungary.

For 1995 and onwards, all kinds of mineral prospecting are treated as GFCF. Unsuccessful prospecting operations will be written off. These are included in intermediate consumption up to 1994.

In connection with the national account compilations made in 1996, the new accounting for the special fee on purchases of real estate (cf. Chapter 3) increased the GFCF for 1993 by 8.9 billion HUF (from 661.1 billion HUF to 670.0 billion HUF).

GFCF of new assets by type of asset and kind of activity is shown in Annex tables 6.2.1-6.2.4.

The effects of the New HNA GFCF estimates for 1991 are shown in Table 4.4:
Table 4.4. Gross fixed capital formation, 1991

<table>
<thead>
<tr>
<th>Description</th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Economic units with legal entity (except housing)</td>
<td>330.4</td>
<td>343.0</td>
</tr>
<tr>
<td>2. NPIs not covered by (1)</td>
<td>--</td>
<td>0.5</td>
</tr>
<tr>
<td>3. Economic units without legal entity (except housing)</td>
<td>17.4</td>
<td>9.8</td>
</tr>
<tr>
<td>4. Financial leasing</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>5. Foreign capital contribution in kind</td>
<td>8.7</td>
<td>8.7</td>
</tr>
<tr>
<td>6. Dwellings</td>
<td>77.6</td>
<td>76.5</td>
</tr>
<tr>
<td>7. Capital repairs</td>
<td>--</td>
<td>58.0</td>
</tr>
<tr>
<td>8. Of which: Dwellings</td>
<td>--</td>
<td>15.6</td>
</tr>
<tr>
<td>9. Other</td>
<td>--</td>
<td>42.4</td>
</tr>
<tr>
<td>10. Trade margins on purchases of existing dwellings</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>11. Non-deductible VAT</td>
<td>--</td>
<td>13.0</td>
</tr>
<tr>
<td>12. Of which: Purchases of dwellings</td>
<td>--</td>
<td>4.5</td>
</tr>
<tr>
<td>13. Other non-deductible VAT</td>
<td>--</td>
<td>8.5</td>
</tr>
<tr>
<td>14. Fees on purchases of fixed assets</td>
<td>--</td>
<td>6.6</td>
</tr>
<tr>
<td>15. Of which: Dwellings</td>
<td>--</td>
<td>3.3</td>
</tr>
<tr>
<td>16. Other</td>
<td>--</td>
<td>3.3</td>
</tr>
<tr>
<td>17 Total GFCF</td>
<td>440.9</td>
<td>522.9</td>
</tr>
<tr>
<td>18. Of which: Dwellings (6+8+10+12+15)</td>
<td>78.1</td>
<td>100.4</td>
</tr>
</tbody>
</table>

Changes in inventories

Changes in inventories are not entirely covered by statistical reports. As in the 1989-91 HNA the inventories of small enterprises, especially unincorporated ones, are not recorded. Tax declarations of corporations include information on closing stocks of inventories. Changes in inventories are estimated as the difference between closing stocks of consecutive years without adjustment for holding gains or losses due to inflation. A quarterly inventory survey has been introduced which will complement the data from tax declarations. However, it only covers enterprises with more than 50 employees. The survey distinguishes between different types of stocks and also provides information on the valuation method for inventories used by enterprises which facilitates the establishment of a methodology for the adjustment for holding gains or losses. Changes in inventories adjusted for holding gains and losses will be introduced in the national accounts for 1994 and onwards. The methodology proposed is explained in Appendix 3.1. It will not be possible to make such adjustments for years before 1994.

Outlays on forest plantations are included in changes in inventories as work-in-progress in the New HNA.

The values of changes in inventories for corporations have been revised since 1991 because some large enterprises which transferred from state to private ownership have submitted their declaration with a very long delay.

Changes in inventories in the government sector are not recorded in the New HNA because the data derived from reports from government institutions are recorded on a cash basis, which implies that materials are recorded as used when purchased.

It should be noted that a statistical discrepancy between GDP estimated by the production method and by the expenditure method is included in the changes in inventories. The positive change in
inventories in the 1989-91 HNA, of 39.9 billion HUF for 1991, turned to a negative change of -12.0 billion HUF in the New HNA, i.e. difference of -51.9 billion HUF. As can be seen from Table 4.5, the change is partly due to the methodological changes and revisions described above, and partly due to the statistical discrepancy between production and expenditure based estimates, which was 12.5 billion HUF in the 1989-91 HNA and -10.2 in the New HNA. The latter is about 0.4 per cent of GDP.

Table 4.5. Changes in inventories, 1991

<table>
<thead>
<tr>
<th>Documented changes in inventories, before deduction of holding gains and losses:</th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporations</td>
<td>10.3</td>
<td>-7.9</td>
</tr>
<tr>
<td>General government</td>
<td>5.6</td>
<td>--</td>
</tr>
<tr>
<td>Agricultural entrepreneurs and own-account production</td>
<td>11.2</td>
<td>5.4</td>
</tr>
<tr>
<td>Other unincorporated enterprises</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Outlays on forest plantations</td>
<td>--</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total documented changes in inventories</strong></td>
<td><strong>27.4</strong></td>
<td><strong>-1.8</strong></td>
</tr>
<tr>
<td>Changes in inventories shown in GDP by type of expenditure</td>
<td>39.9</td>
<td>-12.0</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>12.5</td>
<td>-10.2</td>
</tr>
</tbody>
</table>

Exports and imports of goods and services

Data concerning exports and imports of goods are based on customs declarations collected, processed and published by the Ministry of Industry and Trade. Until the end of 1995 foreign trade statistics treated producers in customs free zones as non-residents. A correction for this is made in the HNA. The data based on customs declaration differ from the corresponding balance of payments data compiled by the National Bank of Hungary (NBH) which uses bank records on payments. NBH expected however to adopt the customs declaration based foreign trade statistics in 1996 which will eliminate this difference. An annex to the Customs Law from 1995 specifies the different transactions which are needed for statistical purposes and which therefore should be specified. Foreign trade in services is derived from balance of payments statistics complemented by a quarterly enterprise survey conducted by the Ministry of Industry and Trade mainly for export and import of construction services and installation work. The data on exports and imports of services obtained from the balance of payments system are not recorded on an accrual basis but are based on cash transactions.

A new reporting system for commercial banks which will be introduced in the near future will improve the data on transactions with the rest of the world. The changes introduced in the balance of payments (BoP) in 1996 concern mostly the classification of transactions.

Exports and imports are still based on the crossing of the frontier basis and no adjustment is yet made to convert this to the change of ownership basis. From 1995 onwards, goods entering and leaving customs free zones will be treated according the 1993 SNA. For 1993 they are not covered by the foreign trade statistics and a special adjustment is made for them, mostly concerning car factories operating in free trade zones. These car factories also import cars for re-sale, which in some cases have been recorded after special permission as imports of spare parts because of their low import duties.

In the 1989-91 HNA, contracted work was recorded on a gross basis in exports and imports of goods in the foreign trade statistics, but on a net basis in production. The discrepancy was implicitly included in the statistical discrepancy in the changes in inventories. In the New HNA, mainly to be
consistent with production, the net treatment has been used, which is a deviation from SNA. Contracted work is recorded as export and import of goods, and not of services which should be the case. The data for 1991 are based on industrial statistics, but after 1991 the customs declarations are used to estimate this item.

Exports and imports include resident households’ expenditure abroad and non-resident households’ expenditure in Hungary based on BoP data. The value of imports includes the estimated value of cars imported directly by consumers. This adjustment was large for 1993. In 1994 however, this phenomenon decreased because of high import duties. In the past, the income from casino services derived from non-residents was treated as current transfers in both the BoP and the 1989-91 HNA. In the New HNA it is included in the export of services.

For 1993 and 1994, imports include the value of military equipment imported from the Russian Federation in exchange for previous loans from Hungary to the Soviet Union. This significantly increased the value of imports.

Table 4.6 shows the main changes between the 1989-91 HNA and the New HNA for 1991 in billion HUF. Exports and imports of goods and services are shown in Annex Table 2.4.

Table 4.6. **Exports and imports of goods and services, 1991**

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Exports of goods and services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Contracted work: production on gross basis</td>
<td>139.9</td>
<td>--</td>
</tr>
<tr>
<td>- Contracted work: fees recorded</td>
<td>--</td>
<td>33.1</td>
</tr>
<tr>
<td>- Change in other services(^1)</td>
<td>--</td>
<td>+12.3</td>
</tr>
<tr>
<td>- Casino services</td>
<td>--</td>
<td>2.8</td>
</tr>
<tr>
<td>- Tourism</td>
<td>--</td>
<td>75.0</td>
</tr>
<tr>
<td><strong>Total imports of goods and services</strong></td>
<td>902.0</td>
<td>842.4</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Contracted work: materials used</td>
<td>111.6</td>
<td>--</td>
</tr>
<tr>
<td>- Contracted work: fees recorded</td>
<td>--</td>
<td>2.0</td>
</tr>
<tr>
<td>- Change in other services(^1)</td>
<td>--</td>
<td>+12.3</td>
</tr>
<tr>
<td>- Tourism</td>
<td>--</td>
<td>37.7</td>
</tr>
</tbody>
</table>

1. The figure indicate the change in the absolute value, not the absolute value.
CHAPTER 5  CONSTANT PRICE ESTIMATES OF GDP

Introduction

The constant price estimates in the New HNA have 1991 as the base year. The estimation methods have not been changed in principle. Double deflation is generally used to compile GDP from the production side for market goods and services. This method is for example used for industry. As in the 1989-91 HNA, this procedure is combined or checked with other methods such as measures of changes in the physical output or changes in number of employees. These other methods are used especially for service sectors which are less well covered by price statistics.

Certain difficulties have emerged recently in the constant price calculations which one should bear in mind when using the data. For example, there have been frequent changes in the coverage of the statistical surveys in recent years. In 1992 the annual industrial survey by industries included corporations with more than 20 employees, while in 1994 the cut-off point was 10 employees. This implies that the volume indices of physical output, used to check the results of the deflation, refer to only a part of production and the share is different year by year. The output of small and large enterprises may have different growth rates.

In the past the weights for constant price estimates of output and especially intermediate consumption were derived from the input-output tables which the HCSO compiled every five years at the level of about 100 industries and products based on additional data collected for the structure of intermediate consumption. The last input-output table refers to year 1991. It is compiled according to the 1989-91 HNA methodology and it also uses the previous industrial classification. The 1991 input-output table is, however, presently being revised using the new industrial classification, TEAOR 92 (cf. Chapter 2) and the methodology of the New HNA. For the years 1992-1993 only aggregated input-output tables (20 industries/products) are available, also using the old industrial classification. This causes difficulties and uncertainties for the process of deflation. For the final estimates for 1994, the weights from a preliminary version of a 37 by 37 input-output table for 1993 are used. This table uses the new industrial classification. The fact that data by kind of economic activity refers to enterprises and not establishments is an additional difficulty because the activity of the enterprise is not homogeneous.

A further problem in constant price estimates is the use of price indices based on different formulas. Other difficulties which have emerged recently will be described under the items to which they refer.

GDP by production

Since 1991, the HNA shows constant price estimates of output, intermediate consumption and value added at the two-digit level of the ISIC Rev. 3 (60 divisions). Although no data by establishments are available, some expert estimates are made of the composition of primary and secondary activities in order to be able to apply the relevant price indices. These estimates are mainly based on the data supplied by the special annual surveys of approximately 4 000 of the largest enterprises (cf. Chapter 2). Goods
producing industries are reasonably well covered by price information based on surveys but the HCSO has so far not conducted any direct price surveys for service industries.

Where constant price estimates of intermediate consumption are not specifically mentioned in the following paragraphs they are obtained by deflation using price indices derived from prices of sales on the domestic market and of imports of the relevant industries and combined using weights derived from the input-output table.

As the following paragraphs will show, the calculation of constant price value added requires the combination of different methods and the use of all information available on volumes and prices as well as experts’ estimates, provided by HCSO and various ministries.

Output and value added by kind of activity in 1991 prices are shown in Annex Tables 2.1.2, 2.1.4 and 3.2.

**Agriculture**

The Agricultural Department of HCSO is responsible for the estimates of output and value added by agricultural products for the total economy. In the past, agricultural output in constant prices was based on quantities and average base year prices, which were less detailed than the price data used for current price estimates. In the New HNA, output of agricultural products (i.e. primary production) at constant prices is obtained by extrapolating base year values by volume indices. The National Accounts Department estimates separate volume indices for the corporate sector and for unincorporated enterprises within the household sector. For non-agricultural production of large agricultural enterprises and co-operatives, producers’ price indices are used to deflate these secondary activities. Total agricultural output is the sum of these two estimates.

For agriculture there are two kinds of price observations:

-- An annual survey of approximately 6,000 enterprises whose main or secondary activity is purchasing agricultural products for sale to other wholesalers and retailers or directly to industry or for export. Wholesale-type prices (called producer-procurement prices) are collected for about 170 products. These are combined into a Fisher type composite index. Because the sample is large, the survey covers about 90 per cent of this activity.

-- A monthly survey of wholesale prices at 162 county wholesale markets and 37 markets in Budapest. The prices for 64 agricultural products are collected by interviewers from producers or sellers. The prices are observed one day of the week, usually the busiest day, and the price index is constructed from the prices most frequently observed, weighted monthly by the quantities of the given products sold at these markets. The survey covers about 30 per cent of sales through these outlets.

In addition to these two prices used to deflate agricultural output, a special annual survey provides prices of agricultural and non-agricultural commodities used for intermediate consumption in agriculture.

In the 1989-91 HNA, the methods used to estimate the base year values of output of agricultural products differed in current and constant prices. These have now been harmonised and give the same value in both current and constant prices.
Industry (mining, manufacturing, electricity, gas and water supply)

Until 1991, the Department for Industrial Statistics, which covered mining, manufacturing and electricity branches, was responsible for compiling tailor made price indices not only for output but also for intermediate consumption, combining price indices of output for domestic use with corresponding import price indices. Double deflation could thus be applied easily for these industries in the HNA. The computation of these price indices is now undertaken by the National Accounts Department.

The annual price observation, based on a sample survey, refers to nearly 5 000 industrial products and services, reported by about 700 enterprises. In 1995, the number of products increased to nearly 5 500 and the number of reporting units to about 800. The prices cover both exports and domestic sales. Domestic prices refer to basic prices, i.e. they exclude VAT and other taxes on products, and include subsidies on products. Export prices relate to FOB prices at the frontier, converted to HUF at the actual exchange rate quoted by the NBH at the date of settlement. Before 1994, the prices were determined on the basis of the total sales of the selected products. Thus the industrial PPI reflected not only the changes in the price levels, but also changes in the structure with regard to domestic versus export sales. Since 1994 the PPI is calculated as a weighted average of domestic and export price indices, using the domestic sales and the export sales of the previous year as weights. This implies that the structural change is shown as a volume change in the constant price estimates.

The goods selected for observation are strictly specified and the appointed suppliers provide the price data directly. The aggregation of the industrial price indices is made in two stages. In the first stage an unweighted average of the price relatives of the individual price representatives is calculated at the 4 digit level of the industrial classification. These are then aggregated to 60 industries (2-digit level of the industrial classification) using sales figures of the previous two years, the reference years, as weights. The price indices are Laspeyres type chain indices.

Intermediate consumption is deflated by relevant sub-indices of the PPI, excluding export sales, and import prices, using weights from the 1986 and 1991 input-output tables.

Construction

Until 1992, the construction price index was based on a sample survey of prices referring to specified units of work, for example one square metre of wall, which could be priced. The number of these representative units of work was more than 1 200 and price indices were calculated for 17 main groups of building and construction projects.

The price index was a chained Laspeyres index using as weights the value of the construction-installation activity of the previous year.

Since 1992, the price index was replaced by a weighted cost price index consisting of two main components, one referring to the price movements of the materials used as intermediate consumption and derived from the price statistics of industry, the other to the changes in per capita wages and salaries. The weights are the annual national accounts estimates for the previous year. The cost price index is compiled for construction sub-branches.
**Wholesale trade**

The constant price estimates are made by combining various volume indices and producers', consumers' and foreign trade price indices. The margin share of the base year (trade margin divided by sales excluding taxes on products) at the 4-digit level of the industrial classification is applied to the corresponding sales value deflated at the same detailed level by the appropriate price indices excluding taxes. The margins for the detailed wholesale trade branches are then aggregated to total output of wholesale trade at constant prices. The same method as used for industries is used to deflate intermediate consumption.

**Retail trade**

A new monthly retail trade survey was introduced in 1994. It refers to retail trade outlets and not to commodity groups as in the past. It is based partly on an area sample, partly on a sample drawn from the business register. The area sample refers to establishments, while the business register sample refers to retail trade enterprises. The survey also covers retail trade outlets of non-trade enterprises. For the year 1994, only the total value of retail sales and the corresponding volume figure have been published, because the first results of the survey are not considered sufficiently robust to be published in detail. The lack of any commodity breakdown in the retail trade survey has caused a break in the time series and a deterioration of the constant price estimates. However, a complete retail trade census for 1995 was conducted in the first half of 1996. This provides a breakdown of sales by about 60 commodity groups and will serve as a benchmark both for the monthly survey and the constant price estimates of retail trade.

At present the total base year value of retail trade output, i.e. the trade margin, is extrapolated by the total volume index of retail trade, obtained by deflating net sales by the retail sales price index, which is based on the CPI. This introduces an error in the resulting volume index when tax rates included in the CPI prices change. For the deflation of intermediate consumption the same method as used for industries is applied.

Special price indices for output and intermediate consumption are compiled for secondary non-trade activities.

**Hotels and restaurants**

The constant price estimates are based on expert estimates using volume and price indices derived from the retail trade survey, the CPI and, in case of price indices for hotel accommodation, from the survey on international tourism.

**Transport, storage and telecommunication**

The estimates at constant prices for these branches are based on expert estimates using tariff indices and quantity indicators. Changes in the relevant components of the CPI are also taken into consideration.
Financial intermediation

The total implicit price index of output, excluding financial and insurance services, is used to deflate the imputed output of all financial activities, including insurance.

The average of the relevant price indices for market services is used for deflating intermediate consumption of financial services since there are no data on the structure of intermediate consumption of financial enterprises.

Real estate, renting and business activity

The constant price estimates are mostly based on the CPI sub-indices.

Non-market services

Output of non-market services, i.e. public administration, education, health and social services, etc., is derived as the sum of constant price estimates of intermediate consumption and value added. In the case of intermediate consumption the estimates rely on producers’, consumers’ and import price indices, weighted by information from the input-output table and the CPI. An annual price survey conducted by the Ministry of Health provides detailed data on the price changes of goods and services used as intermediate consumption in the institutions belonging to the health sector. The same survey is also used to determine price changes in education. The results are checked and adjusted with other indicators whenever possible.

Value added in constant prices is the sum of compensation of employees, other taxes on production and consumption of fixed capital in constant prices. Compensation of employees and other taxes on production are extrapolated by the unweighted number of employees adjusted for an annual 1.5 per cent increase in productivity. Consumption of fixed capital in constant prices is compiled in the same way as in current prices, using 1991 replacement costs for the capital stock estimates (cf. Chapter 3).

Net taxes on products

Constant price estimates of taxes and subsidies on products can either be derived by deflation using tax and subsidy rate indices or by extrapolating base year values of taxes and subsidies on products by changes in volume of the tax/subsidy base, either in value or quantity terms. Both methods have posed major problems in the HNA because of the frequent changes in tax regulations and the lack of reliable information on volume changes of products in physical terms. It is mainly the extrapolation method which has been used in the New HNA. Data on tax and subsidy rates of 1991 are combined with volume indices of the relevant products derived from external trade and consumption statistics and from data collected by the Tax Office and the Ministry of Finance.

The changes in tax regulations have caused a considerable increase in the implicit price index of net taxes on products. The lack of information concerning the commodity composition of final consumption of domestically produced and imported products has also contributed to the uncertainty of the estimation of net taxes on products.
GDP by type of expenditure

*Household final consumption expenditure*

Besides GDP by the production approach at constant prices, the HNA also includes constant price estimates by the expenditure approach. These estimates are shown in Annex Table 2.2.2.

The lack of information concerning the commodity structure in the retail trade survey affects the quality of the estimates of final consumption expenditure of households at current and constant prices. As described in Chapter 4, the structure of household consumption is based on the household budget survey. However, the retail trade census for 1995 will provide a detailed commodity breakdown on which improved constant price estimates can be based. Presently two methods are combined to calculate household consumption expenditure at constant prices. A few easily measured products, mostly own-account production of food commodities, are estimated directly in constant prices by multiplying unit prices of the base year with the quantities consumed. For the remaining goods and all purchased services the current values are deflated using the relevant sub-indices of the CPI. The constant price estimates are compiled at the level of about 100 commodity groups.

The CPI is compiled monthly and the price survey includes 1,800 representative items collected by 145 price collectors from selected outlets in 86 towns. The CPI is a Laspeyres-type index. The weights in any given year are derived from the results of the household budget survey conducted two years earlier. Up to 1993, the survey covered 12,000 households, since then about 8,000 households.

Actual household consumption by goods and services at constant prices is given in Annex Table 5.3.2.

*Final consumption expenditure of government and NPISHs*

The value at constant prices of final consumption expenditure of government and NPISHs, covering both collective and individual consumption expenditure, is obtained from the production side, that is as the output of these services in constant prices minus incidental sales. The implicit deflator for total output at the kind of activity level is used to deflate incidental sales at that level.

*Gross fixed capital formation*

GFCF at constant prices is calculated by deflating the current values. The individual prices are derived from foreign trade, industrial and construction price surveys. The price indices of GFCF are weighted by expenditure figures obtained from the annual investment surveys. These surveys cover all enterprises with over 50 employees. The weights refer to 17 types of buildings and structures, 36 types of machinery and equipment which are differentiated according to origin (domestic production or imports), and about 10 other investment components.

*Changes in inventories*

Changes in inventories at constant prices is estimated as the difference between opening and closing stocks at constant prices, obtained by revaluing the stocks to base year prices. Inventories of raw materials and semi-finished goods are deflated by input price indices of the relevant industries. Stocks of
finished goods are deflated by the output price index of industrial and agricultural products. Inventories of goods for sale in retail trade are deflated mainly by CPI sub-indices.

As in the current price estimates, changes in inventories in constant prices include a statistical discrepancy between GDP by the production approach and GDP by the expenditure approach.

**Exports and imports of goods and services**

Export and import price indices for goods are calculated mainly from unit values based on value and quantity data from customs statistics. The unit values refer to export prices f.o.b. and import prices c.i.f. Imports for re-export are excluded. Export and import price indices also take into account price information from enterprises for heterogeneous product groups (machinery, consumer goods). The price indices are of Fisher-type.

For exports and imports of services the average price indices of commodities in foreign trade are used as deflators since no information is available on price changes for foreign trade in services.
CHAPTER 6  SECTOR ACCOUNTS

Introduction

In the 1989-91 HNA two set of tables presented the production, generation, distribution and use of income. The first set gave a breakdown by sectors and branches for producers’ units only. It included all transactions of unincorporated enterprises related to production, generation and distribution of income and capital transactions. The second set showed income and outlay transaction for households as consumers. As the two sets of information were aimed at different types of analysis and use, they could be linked only for a few bridge items. The tables were a composite account showing production and consequent generation of income, distribution and redistribution of income, use of income and consequent saving and the elements of a capital account.

In the New HNA, these tables have been replaced by the 1993 SNA sequence of accounts for institutional sectors as described in the Chapter 1, and the same institutional sectoring is used throughout the accounts. They are shown broken down both by the main SNA sectors and by sub-sectors, referring to ownership or by legal form (See Chapter 2 for coverage of these). The production and generation of income accounts are further broken down by kind of economic activity.

The data sources for the sector accounts are the same as for GDP by production and expenditure and are described in Chapter 2. The data base for non-financial enterprises is an especially important tool for compiling the sector accounts. It provides most items of the income generation and distribution account and certain transactions on the capital account at the level of individual enterprises or groups of enterprises. This information is relevant for various analyses as a base for economic policies.

For financial institutions both tax declarations and information from supervisory bodies are used as data sources. Interest and explicit service charges of banks are based on data from the banking supervisory body while tax declarations are used for all other flows of financial institutions. The income statements and balance sheets of insurance companies, collected by the Insurance Supervisory Agency, provide the data on premiums, claims, reserves, etc. of insurance companies. Other flows such as intermediate consumption and wages and salaries are based on tax declarations.

For the income accounts of the household sector various data sources are combined. The household budget survey (HBS) is used only in exceptional cases for revenue data and for own-account production, because they are in general underestimated in the household budget survey. The income data for the whole year obtained through interviews in addition to the monthly diary are, however, considered more reliable than data provided by the survey diary for one month. The HBS data on income and expenditure are 30-40 per cent lower than the national accounts estimates. The main data sources are therefore the data base on non-financial enterprises, data from government units on wages and salaries, data from tax authorities and data from the social security fund. Banking data are also an important data source.

For NPISHs the data source is the annual survey, which has a complete coverage but for which the response rate is only about 50 per cent. The data are grossed up to the total population using
additional information to stratify the grossing up procedures according to legal form and activities. The data on political parties are obtained from their public reports. The NPISHs questionnaires provide information on their various income sources: membership fees, donations from households, corporate sector and government grants, property income etc. and their expenditure. Some NPISHs, however, are unwilling to reveal how much they have received from households in gifts.

The production and generation of income accounts are available for all sectors. At this stage, it is not possible to complete the redistribution accounts for the government sector and for the rest of the world because of incomplete information for these two sectors. Therefore, it has not been possible for HCSO to compare information provided by enterprises and households with data from government and the central bank as is done in most OECD countries. With the establishment of a central government Treasury and a government information system, an improvement can be expected from 1996 for the central government sector. Also the Balance of Payments compiled by the National Bank of Hungary will provide improved data for the external account in the New HNA from 1996.

Production account

The transactions on the production account and the changes concerning them introduced in the New HNA are discussed in Chapter 3 and will not be repeated here. The same data sources are used as for GDP by production. One should bear in mind, however, that in comparison with the 1989-91 HNA:

-- Production of non-financial enterprises no longer includes production of small sole proprietors, own-account construction and agricultural production, and housing services of owner occupied dwellings which are now recorded on the production accounts for the household sector. However, production of non-financial enterprises includes the output of NPIs serving businesses and financed by them.

-- Production of financial corporations is considered market output, therefore it is no longer measured at cost (including for NPIs serving exclusively financial corporations). In calculating FISIM (financial intermediating services indirectly measured) no adjustment is made for interest on own capital on the assumption that banks invest their own capital in assets such as shares and buildings, and not in interest bearing assets. The assumption is based on the rules and limitations concerning how banks may invest their capital. FISIM is not allocated to users but follows the 1968 SNA recommendation to allocate it as intermediate consumption of a nominal unit. The estimation of output of insurance services and their allocation to users in the New HNA is described in the Appendix 3.2 of Chapter 3: The Accounting of Insurance in the New HNA.

-- Production of general government no longer includes the output of NPIs serving corporations or households and mainly financed by them. These are instead recorded on the accounts for corporations and NPISHs respectively.

-- The household sector includes the production of unincorporated enterprises, production of small partnerships and sole proprietors, own-account construction and agricultural production and housing services of owner occupied dwellings. These are no longer included in the production of non-financial corporations.

As mentioned in Chapter 2 there may be some market producers included in the government sector because government encourages units to charge for their services to cover their costs. As the government data are based on legal criteria and not establishments, it is difficult to separate secondary market activities and allocate them to the corporation sector even if the sales cover more than 50 per cent
of the costs. However, there is a tendency to transform important market production to separate corporations/quasi-corporations, which are then classified to the sector non-financial corporations. At present, the total output of government institutions is valued by costs; all sales revenue is deducted as incidental sales and government consumption expenditure is derived as the difference. To the extent that these market activities may generate a net operating surplus, it implies that government output and consumption expenditure are correspondingly underestimated because net operating surplus realised on the secondary market activities is not taken into account. The value of incidental sales by government was about 10 per cent of the total output of government in 1993-94.

**Generation of income account**

The generation of income account shows how the income generated by the production process is allocated to uses.

Definitions of the transactions on the generation of income account have been changed in the New HNA as compared with the 1989-91 HNA. In particular, the coverage of compensation of employees has been extended to include:

- Welfare services provided by employers for employees and their families and not financed by fees paid by employees; they are treated as wages and salaries in kind (10.7 billion HUF in 1991).
- Profit assigned to employees; this item is no longer specified in the new business accounting system introduced in 1992 (30.1 billion HUF in 1991).
- Subsidised interest on loans from employers, which is considered as wages in kind (2.9 billion HUF in 1991).
- Employers’ social security contributions, including imputed contributions for unfunded social benefits, such as pensions paid by employers and the sickness benefits paid by employers during the first days of sick leave (for 10 days in 1994 and 15 days in 1995). Moreover, from 1995 one third of further sick payments must be borne by the employer. This is included in imputed social contributions. (354.9 billion HUF in 1991).

Compensation of employees, however, excludes income of individual entrepreneurs, which was included in labour income in the 1989-91 HNA. It is now part of the item operating surplus/mixed income of the household sector (See below) (255.6 billion HUF in 1991).

Estimates for wages and salaries are mainly based on data from the enterprise data base and government reports. The definitions of wages and salaries in cash obtained from the tax declaration correspond to SNA recommendations. Wages and salaries not reported in the tax declarations are estimated from the annual enterprise labour force survey covering enterprises with more than 20 employees. However, although the definition of wages and salaries in the enterprise labour force survey is somewhat narrower than the national accounts definition no adjustment is made for this. For small enterprises not covered by the survey, the size category according to number of employees as recorded in the business register is used as a proxy for the number of employees which are then multiplied by average wages by branch. Wages and salaries for government employees as reported by government institutions to the Ministry of Finance are entered into the national accounts without adjustments.
Employers social security contributions cover actual and imputed contributions. Actual contributions are based on social security records, but imputed contributions are obtained from the enterprise data on social benefits.

Mixed income of unincorporated enterprises is based on data from tax declarations adjusted for under-reporting, as explained in Chapter 3. For own-account production in agriculture, income is derived from the commodity flow estimates of output.

Other taxes and subsidies on production exclude taxes and subsidies on exports, treated as taxes and subsidies on products; this is a classification change compared with the 1989-91 HNA. Withdrawn profits of fiscal monopolies are no longer treated as other taxes on production, but as taxes on products. The subsidy of 1.8 billion HUF in 1991 paid from extra budgetary funds to enterprises employing handicapped persons is recorded as other subsidies on production in the New HNA. In the 1989-91 HNA it was included in the item “Other transfers”. Taxes and subsidies on products are recorded only for the total economy, while other taxes and subsidies on production are allocated to sectors.

The data sources for taxes and subsidies on production are the special annual tax declaration entitled “Transactions with the central government”, reports of the local government and the report on the execution of the general government budget.

Table 6.1. Other taxes and subsidies on production, 1991

<table>
<thead>
<tr>
<th></th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other taxes on domestic production</td>
<td>85.0</td>
<td>72.1</td>
</tr>
<tr>
<td>of which: to central government</td>
<td>66.2</td>
<td>59.2</td>
</tr>
<tr>
<td>to extrabudgetary funds</td>
<td>18.8</td>
<td>12.9</td>
</tr>
<tr>
<td>Other taxes on exports</td>
<td>0.4</td>
<td>--</td>
</tr>
<tr>
<td>Payroll taxes</td>
<td>--</td>
<td>2.1</td>
</tr>
<tr>
<td>Local taxes</td>
<td>--</td>
<td>10.7</td>
</tr>
<tr>
<td>of which: taxes on lands</td>
<td>--</td>
<td>1.2</td>
</tr>
<tr>
<td>Other taxes on production, total</td>
<td><strong>85.4</strong></td>
<td><strong>84.9</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other subsidies on production for sale on the domestic market</th>
<th>1989-91 HNA</th>
<th>New HNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>of which: from central government</td>
<td>16.1</td>
<td>16.1</td>
</tr>
<tr>
<td>from extrabudgetary funds</td>
<td>4.4</td>
<td>6.2</td>
</tr>
<tr>
<td>Other subsidies on exports</td>
<td>34.9</td>
<td>--</td>
</tr>
<tr>
<td>of which: rouble area</td>
<td>9.1</td>
<td>--</td>
</tr>
<tr>
<td>non-rouble area</td>
<td>25.8</td>
<td>--</td>
</tr>
<tr>
<td>Other subsidies on production, total</td>
<td><strong>55.4</strong></td>
<td><strong>22.3</strong></td>
</tr>
</tbody>
</table>

In line with the 1993 SNA, the generation of income account has a new balancing item, called mixed income. This applies to the household sector because it covers returns both to labour of the self-employed and to capital. It applies to all household sector accounts except for the services of owner-occupied dwellings, which has no labour input and so the balancing item is shown as operating surplus.

Operating surplus is shown gross, i.e. including consumption of fixed capital. The Hungarian accounting system records depreciation according to historic costs, which are not suitable for estimates of consumption of fixed capital in national accounts; the SNA recommends replacement costs. Pending the development of capital stock estimates using the perpetual inventory method, approximate estimates of

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consumption of fixed capital at replacement costs are compiled only for general government. CFC for NPISHs is based on their book-keeping records. Operating surplus for government covers only CFC. Operating surplus on market activities of government units is no longer compiled by kind of activity.

Income generation by sectors and industries is shown in Annex Tables 3.5.1-4 and by sub-sectors of ownership in Tables 4.4.1-3.

Allocation of primary income account

The account for allocation of primary income shows the claims on value added by institutional units and the flows are recorded as resources to those units.

Compensation of employees received by households should include wages and salaries received from abroad, but exclude those paid by resident employers to households abroad. A precondition for consistent treatment of wages and salaries paid to and received from abroad is the improvement of BoP statistics. At present, therefore, those adjustments to compensation of employees received by resident households cannot be made.

Taxes minus subsidies on production are recorded as income of general government.

All property income is recorded in the account for allocation of primary income. In the 1989-91 HNA the recording of property income was rather heterogeneous and the flows were shown net. In the New HNA the property income flows are recorded gross and follow the 1993 SNA recommendations. However, property income is recorded only for financial and non-financial corporations and for the household sector, as neither government data sources nor balance of payments statistics at present can provide the necessary data for the government sector and the rest of the world. The available data on property income are therefore not balanced.

Property income covers in principle:

-- interest;
-- distributed income of corporations;
  · dividends;
  · withdrawals of income of quasi-corporations;
-- reinvested earnings of foreign direct investment;
-- property income attributed to insurance policy holders; and
-- land rent.

The New HNA records estimates for all types of property income including reinvested earnings on foreign direct investment. The estimates are based on the database for non-financial corporations. For reinvested earnings of foreign direct investment the first estimates cover the years 1992-94. All property income flows to and from enterprises are recorded on an accrual basis.

Property income on life insurance funds is treated as property income of households and that on non-life insurance funds is allocated to all holders of non-life insurance policies, in proportion to premiums paid.
Interest payments are shown gross (before deduction of FISIM) for all sectors and to avoid double accounting FISIM is introduced as an adjustment item for financial corporations. Interest paid is the market interest rate. The subsidies on interest on loans to households for housing purposes by employers are treated as wages in kind, and those by government as social assistance benefits in cash, recorded in the secondary distribution of income account.

The item “income from direct investment” which existed in the 1989-91 HNA covering dividends, returns on deposits of wealth, compulsory dividends transferred to the state, etc. is replaced in the New HNA by distributed income of corporations, that is dividends and withdrawal of income of quasi-corporations. The latter can be received by any sector, just as in the case of dividends.

Because of the incomplete data for the government sector and the rest of the world the balancing item of this account, “The balance of primary incomes”, is recorded only for the sectors Non-financial corporations, Financial corporations and Households.

Secondary distribution of income account

The account for secondary distribution of income shows the redistribution of primary income through transfers, especially taxes and social insurance transactions.

Taxes paid by enterprises no longer include non-deductible VAT on gross fixed capital formation, treated as taxes on products and imputed depreciation of municipality owned dwellings.

Taxes paid by households refer, as in the past, to personal income tax but also include other taxes and duties such as current local government taxes on dwellings and land intended for buildings (either proportional to the value or the size of the asset or as a lump sum independent of the value or size of the asset), car tax, fees such as fishing and hunting licences, etc.

Under social security contributions are presently recorded:

-- employers' actual contributions to the Social Security Fund;
-- actual contributions from employees and self-employed persons to social security; and
-- employers’ imputed contributions to unfunded schemes, not included in the 1989-91 HNA.

The contributions are recorded as paid by households to general government and to the corporate sector. Private pension funds have started to operate in Hungary and contributions to them are presently included in life insurance but will be recorded separately in the future.

Social benefits in cash cover:

-- pensions, sickness benefits, unemployment benefits paid by social security;  
-- social assistance benefits in cash, paid by central and local government to households, for example maternity leave benefits, unemployment benefits, general family allowances and special allowance to families with many children; and  
-- unfunded employee social benefits, paid by financial and non-financial corporations to households, such as sickness benefits during the first days of illness.
Under other current transfers are recorded:

-- net non-life insurance premiums, i.e. premiums minus insurance service charge;
-- non-life insurance claims;
-- membership fees to NPISHs;
-- current international co-operation;
-- emigrants’ remittances, etc.
-- current transfers to NPISHs from other sectors, notably households and government; the data sources do not at present allow the recording here of transfers from and to the rest of the world, other than those mentioned under emigrants’ remittances;
-- fines and penalties; and
-- lotteries and gambling.

For the accounting of life and non-life insurance in the New HNA, see Appendix 3.2.

**Redistribution of income in kind account**

The social transfers in kind described in Chapter 4 under individual consumption are recorded in this account as paid by government and NPISHs to the household sector.

**Use of disposable income account**

The main item on the account for use of income is final consumption expenditure which is recorded for general government, NPISHs and households and which is described in Chapter 4. It should be stressed that the total final consumption expenditure of households is mainly derived as a residual between disposable income and saving.

Until the early 1990s, household consumption expenditure was estimated directly, mainly using information from the retail trade statistics, supplemented by data from agricultural and foreign trade statistics, service statistics and the household budget survey. Due to the deterioration of the data sources since the early 1990s, HSCO has been obliged to rely more on financial data to first determine household net lending/borrowing and then derive saving as a residual on the capital accounts and finally household consumption as a residual on the use of income account. This method is very unsatisfactory, and in the near future HCSO intends to return to making direct estimates of household consumption expenditure. However, it requires major improvements of retail trade statistics and the household budget survey.

**Use of adjusted disposable income account**

Actual consumption of government refers to collective consumption described above and that of households consists of final consumption expenditure of households and expenditure on individual consumption by government and NPISHs, all described under final consumption in Chapter 4.
Capital account

The main items on the capital accounts are gross fixed capital formation, changes in inventories and capital transfers. Because of lack of reliable data, the capital account is completed only for the household sector. For the total economy, gross fixed capital formation (GFCF) and changes in inventories are recorded. The content of and data sources for the GFCF and changes in inventories were described in Chapter 4.

Capital transfers to households in the New HNA cover:

-- government grant to households with children to purchase or construct a dwelling; and

-- government issues of compensation cards (See the Appendix 6.1 to this chapter for a description of compensation cards and their recording in the New HNA).

The capital transfers paid by households include household contributions to financing infrastructure investments (gas-and waterpipes, telephone network etc.). These are exceptionally large payments, for example total costs of water pipelines are financed by the inhabitants of the locality. These fixed assets will be owned by the local government.

It should be noted that in the New HNA the GFCF and inventories of unincorporated enterprises are recorded on the capital account of the household sector, which has considerably increased the capital formation of this sector compared to the 1989-91 HNA. GFCF of households also includes:

-- Own-account construction of dwellings.

-- Purchases of dwellings from the constructor, which were previously included in the GFCF of the sector undertaking the construction in the 1989-91 HNA.

-- The purchases of dwellings from local government due to privatisation of local government owned dwellings. These purchases are valued at the price recorded in the purchase contract. (See the Appendix 6.1 to this chapter concerning the recording of privatisation in the New HNA).

The table below show the differences between the 1989-91 HNA and the New HNA in estimating GFCF in dwellings in the household sector.

<table>
<thead>
<tr>
<th>Table 6.2. Accounting of GFCF in dwellings on the capital account of the household sector, 1991</th>
<th>Billion HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989-91 HNA</td>
<td>New HNA</td>
</tr>
<tr>
<td>Construction of new dwellings excluding VAT</td>
<td>77.6</td>
</tr>
<tr>
<td>VAT on dwellings</td>
<td>4.5</td>
</tr>
<tr>
<td>Privatised dwellings paid in cash</td>
<td>4.4</td>
</tr>
<tr>
<td>Purchase of privatised dwellings by credit</td>
<td>--</td>
</tr>
<tr>
<td>Trade margin on purchases of existing dwellings</td>
<td>0.5</td>
</tr>
<tr>
<td>Fees on purchase of real estate</td>
<td>--</td>
</tr>
<tr>
<td>Capital repairs</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total GFCF in dwellings</strong></td>
<td><strong>87.0</strong></td>
</tr>
</tbody>
</table>
The figures on construction of new dwellings have been slightly revised in the New HNA. The revision is due to a re-estimation of costs per square metre and by type of dwelling (detached family houses, apartment buildings, summer cottages etc.)

As mentioned above, net lending/borrowing of the household sector is estimated directly and saving is derived as a residual on the capital account. Data for net lending/borrowing are obtained from the HNB. It covers the changes in household bank deposits in HUF and foreign currencies, securities and equity, such as shares, life insurance reserves and changes in loans, except new government housing loans not passing through the banking sector. Corrections for holding gains and losses on foreign currency deposits due to foreign exchange fluctuations are made by the HCSO. HNB is presently revising the methodology for estimating net lending/borrowing of households.
APPENDIX 6.1

Recording of privatisation in the New HNA

The New HNA does not yet include financial accounts in the sector accounts, except a summary account for the household sector. Therefore the only transactions related to privatisation which the New HNA records are those related to the issuing of compensation cards and privatisation of dwellings. In principle, direct sales of other government fixed assets should also be recorded on the capital account. Privatisation through direct sales of government owned unincorporated or quasi-corporate enterprises or through sales of shares only involve financial transactions.

Compensation cards

Compensation cards are issued as compensation for loss of property due to confiscation during World War II or the centrally planned period after the war. No property is restituted as such to private persons but compensation in cash is offered to the former owner or his/her descendants. Each compensation card has the same face value but the total compensation to a former owner can differ, the maximum value being 5 million HUF. Up to the end of 1994, the cards were interest bearing. Compensation cards were also issued to non-resident Hungarians, but the use of the cards by non-residents is rather restricted compared to resident card holders. The cards have been transferable and have been traded at a value lower than the face value, at a certain period as little as at between 30 and 40 per cent of the face value. In principle the cards can be used at face value, plus interest, but that has not always been the case.

The original card owner can use the card to purchase

-- A dwelling if he/she is the tenant.
-- Land at auctions in the region where the original land was located; only resident Hungarians can buy land; in case of agricultural land, the buyer must cultivate it for at least 5 years.
-- Shares or businesses; the cards have been used especially in the privatisation of pharmacies; the price per share in terms of the value of the card has normally been lower than the market price of the share (i.e. if paid in cash).
-- A life insurance with annuities, depending on the age of the card owner.
-- Household goods to a value of about 70 per cent of the face value of the card.

A second owner of the compensation card could originally only use it to buy shares or businesses. It seems that purchase conditions have been less favourable than for the original owners: card prices per share have been higher than for original card owners. Second owners can now also use the cards for buying dwellings, if he/she is the tenant of the dwelling.
There is no information on how much household equipment has been bought using the cards. The seller of the equipment becomes the second owner of the card and can in turn use it for acquiring assets. The cards have been mostly used to buy the outlet or the right to rent the outlet.

From the beginning of the programme to the end of 1994, compensation cards had been issued for a face value (excluding interest) of about 120 billion HUF. During this time the accrued interest amounted to 70 per cent of the face value. Since the beginning of 1995 no interest has accrued. In late 1996 the outstanding value of cards including interest was not known. The card issues are not recorded as an outlay in the government budget, but the exchange of the cards against other government assets is recorded as revenue by the State Property Agency and the State Holding Company and from 1995 State Privatisation and Holding Share Company (APV Rt) at the face value of the shares for which the compensation cards were exchanged.

The New HNA records compensation cards at their transaction value (including interest) in the capital account as capital transfers from government to households at the moment they are exchanged for shares, land or dwellings, and then in the same account as acquisition of fixed assets, i.e. as GFCF in dwellings, or net acquisition of land. Household acquisition of shares using the compensation cards should appear in the financial account. Since this is not complete, this share acquisition appears only implicitly included in the net lending/borrowing figure for the household sector which is directly estimated by the NBH and recorded in the capital account of the household sector.

As the compensation cards are tradable, they should in principle be recorded at the face value as a capital transfer from government to households in the year they are issued and as a purchase of a financial asset in the same year. Subsequent purchases of fixed assets or shares should be recorded at the transaction price, when the transaction takes place. The interest accrued on the cards should be treated as interest payment from government to the card owner. The difference between the transaction price minus the interest and the face value should be recorded in the revaluation account.

Government sales of dwellings and land are not yet recorded in the HNA as negative government GFCF or negative net acquisition of land on the capital account of government, because all information to complete that account is not available. They are however taken into account when calculating the corresponding figures for the total economy. There is no double accounting in the accounts. As there are no financial accounts and balance sheets yet in the HNA, the privatisation through direct sales of enterprises and sales of shares against compensation cards or cash cannot be recorded and followed in the HNA at present.

As mentioned above, prices of shares bought with cards are different from those bought with cash. HCSO proposes recording all share purchases at the cash price, which they consider as the market price and treating the difference as a capital transfer to households. A treatment more in line with 1993 SNA would be to record the sales of shares at the actual transaction prices, although they are different for shares bought with compensation cards and with cash. The difference between the value settled with the compensation card and the market value for which shares could be sold against cash should be recorded as revaluation on the revaluation account. This treatment would be analogous with the recording of household purchases of government owned dwellings described below.

**Privatisation of dwellings**

For state owned dwellings a market value has been established, which in principle refers to the value of an unoccupied dwelling. When the present tenant buys the dwelling the actual price paid
according to the purchase contract is lower than the market value, often considerably lower. The purchase price is at the discretion of the local authorities. A minimum of 10 per cent of the price is obligatory as down payment; the rest can be paid with a preferential loan from government with very low interest rate. If the tenant pays the whole price at once, a 40 per cent reduction in the price is given. If the tenant repays the loan in one instalment at a later stage a 40 per cent reduction of the outstanding liability is given. The information base does not allow a distinction between the reduction in purchase price in case of an initial total payment of the price, housing loans provided and the cancelling of loans at a later stage. All these flows are treated as a capital transfer from government to households.

In the capital account of households, the GFCF in dwellings is valued at the actual price, i.e. at the price stated in the purchase contract.

Net lending/borrowing by households should implicitly include the transactions related to household loans. However, because the item net borrowing is based on bank statistics, it does not cover household loans from government, but on the other hand it covers the annual reimbursements of the loans.
CHAPTER 7 REGIONAL ACCOUNTS

In 1994 for the first time, the HCSO compiled some national accounts aggregates at a regional level based on the existing data sources. These estimates are only considered experimental. It is expected that in the future the reliability of the results will be improved through the introduction of new data collections, especially the use of local units in production statistics. This might enable HCSO to include in the regular annual publications on national accounts some regional breakdown of national accounts aggregates.

The territory of Hungary is divided into 20 administrative regions, 19 counties and Budapest, which is a separate regional unit. The regional estimates are made at this level. The average size of these regions with regard to territory and population is smaller than the regional classification used for regional accounting in the European Union. The counties in Hungary are comparable to level 3 of European Union nomenclature for territorial units (NUTs).

The estimates cover the following aggregates:

-- gross value added by industries (17 ISIC Rev. 3 sections);
-- generation and primary distribution of income accounts for households; and
-- gross fixed capital formation by industries (17 ISIC Rev. 3 sections).

The estimates are mainly compiled by a “top-down” method, that means by distributing the national figures by region using indicators which are available at regional level and which correspond as closely as possible to the variable to be estimated. In some cases the data sources allow the use of a “bottom-up” method, to estimate the regional data directly. The result of the regional compilations is shown in Annex Table 7.

Gross value added

Non-financial corporations

In the sector non-financial corporations (NFC) the gross value added estimated at the individual enterprise level was distributed in proportion to the wages and salaries recorded according the location of the production. The annual survey providing this information covers about 10 000 corporations (excluding agriculture) with over 50 employees. Information is collected on the number of employees and wages and salaries by the 20 regions. In 1994 these corporations provided 77 per cent of the total gross value added in the NFC sector. Of the 10 000 corporations, 1 300 had locations in more than one region. About 44 per cent of the gross value added of NFCs was reallocated to a different region than the place where the corporations were registered.

In the case of non-agricultural corporations with 50 and less employees and enterprises classified to agriculture it was assumed that the production is carried out in the region where the corporation is registered.
For quasi-corporations, i.e. units without legal entity but paying corporation profit taxes, the place of registration is regarded as the place of production. The value of their output is estimated from their tax declarations. As discussed in Chapter Three the value of intermediate consumption is not derived from the tax declarations because of the deliberate over-reporting of costs and the low quality of the responses in general. The ratio of intermediate consumption to output of a selected group of corporations with legal entity in the same region, of the same size and with the same activity was used as reference when the intermediate consumption of quasi-corporations was estimated. In this case a “bottom-up” method was used where the regional differences in the profitability of enterprises (the ratio of gross operating surplus to output) was taken into account.

**Financial corporations**

The gross value added of financial corporations is allocated to regions on the basis of wages and salaries paid in the regions. As gross value added of banks and insurance companies is not estimated at individual enterprise level because only aggregated data are provided by the supervisory bodies, the allocation of gross value added by region can be done only at an aggregate level but separately for financial intermediaries, for insurance and for auxiliary financial services.

**Household sector**

For the household sector different methods of estimation are combined. In the case of small unincorporated enterprises paying personal income tax on entrepreneurial income the method used is similar to the one for quasi-corporations. The only difference is that the values of both per capita output and intermediate consumption are adjusted based on the corresponding value of reference corporations with legal entity. The number of unincorporated enterprises by regions and by industries is obtained from tax declarations. The gross value added of other small scale market production within the household sector (not recorded separately in the tax declarations) is distributed by regions in the same proportions as the recorded production, for example, in the case of letting of rooms to tourists by private persons. If reliable data on tourism expenditure by regions could be collected, it could contribute to the improvement of these estimates.

The regional breakdown of household agricultural production is obtained using the regional distribution in the household budget survey. The value of imputed rent of owner occupied dwellings is based on the number and size of dwellings by region. The rent by square meter is differentiated by the type of location (town or village) and some parameters reflecting either regional differences in the demand for dwellings or the quality of dwellings.

**General government**

For the government sector, the wage component of value added of local government is allocated to regions based on individual reports of local government institutions, i.e. using the “bottom up” method. Wages within institutions are split by kind of activity in the same way as at the national level. The consumption of fixed capital of local government is estimated first at the national level, using the data on the total capital stock for local government, and then the value is distributed by region based on the closing stock of fixed assets derived from the reports of the institutions. Some central government institutions such as the HCSO, have regional offices, which are recorded separately. They are distributed by region “bottom-up”. In the case of other institutions, the level of wages and salaries are used to allocated the gross value added by region. The data on wages are obtained by the same survey as for
corporations. The value added of defence and public security is divided by region according to the total value added of the national economy.

**Non-profit institutions serving households (NPISHs)**

Most non-profit institutions indicate the region of their activities in their statistical reports. The value added of the remaining NPISHs, for example political parties, which are not obliged to report to the HCSO and for whom the data are derived from their public reports, is distributed by region in proportion to the other NPISHs.

**FISIM and net taxes on products**

Gross value added at basic prices is thus obtained by region. FISIM is then deducted and net taxes on products added in proportion to the basic prices values by region. This gives gross value added at purchaser’s prices by region, i.e. GDP at purchaser’s prices by region.

**Household accounts by regions**

The items on the generation and primary distribution of income accounts for the household sector are estimated by region of residence. The distribution of compensation of employees is estimated according to data derived from the corresponding sum in the personal income tax declarations by region. The value of mixed income and operating surplus is derived as a balancing item in value added. Property income is allocated to regions on the basis of stock of deposits held in the regional branches of the National Savings Bank.

**Gross fixed capital formation**

GFCF by region is based on the annual statistical survey on investments. This survey covers enterprises with over 50 employees and includes data by the regions where investment activity is carried out. Information on the number and size of dwellings built is available from the local authorities, where these data are registered. Some additional items, such as household GFCF in fixed assets other than dwellings are allocated in proportion to the part of GFCF already estimated by region.
CHAPTER 8  FUTURE WORK

In the coming years, one of the most important tasks is to improve the reliability of the estimates by improving the response rate of statistical surveys and the coverage of the statistical business register, by improving and extending price statistics and by eliminating inconsistencies in the basic data. Some experimental work is already undertaken in order to expose the methodological differences between various macroeconomic statistical systems in Hungary and to estimate the size of discrepancies caused by them. In many cases the data sources should be harmonised. For example data on exports and imports of goods in the national accounts can be derived either from customs declarations or from bank acceptances and interest flows can be recorded either according the paying transactor or the receiving transactor.

The compilation of production accounts by kind of economic activity relies basically on data referring to institutional units and not establishments. A major task is to introduce new estimation methods based on a structural survey of enterprises, similar to those used in many European countries. The content of the survey and its collection method will be decided in the near future. The relations between supply and use of goods and services at current and constant prices are not systematically checked with data by types of goods and services, except in agriculture and housing construction. This has introduced an uncertainty concerning the reliability of estimates of production and their use. In 1996, a new product classification was introduced both in production and foreign trade statistics, based on the Combined Nomenclature. This provides an opportunity for the HCSO to introduce the compilation of commodity balances in the HNA, which will also contribute to a better integration of input-output tables with the annual national accounts. The compilation of a new detailed input-output table is planned for 1998.

New estimation methods are presently being developed to improve the estimates of changes in inventories by eliminating holding gains and losses due to inflation from the estimates of GDP by production and expenditure approaches. (Cf. Appendix 3.1). The result of this will be introduced in the estimates for 1994 onwards.

Other improvements depend on the availability of improved government finance statistics and balance of payments statistics, for which a prerequisite is the revision of both the existing government accounting system and the methodology of the balance of payments. As already mentioned in the previous chapters this revision has started and the first results should be available from 1996.

Presently no data are published on stocks of fixed capital and consumption of fixed capital (except for non-market services), because in available data sources stocks are valued at historical cost and not at current replacement cost. When available resources allow, the HCSO intends to use a simplified perpetual inventory method and to estimate stocks of fixed assets at replacement costs to improve the model. As fairly detailed long time series of gross fixed capital formation exist in Hungarian statistics, this data set can be used as a starting point. The data set permits the calculation of capital stock by certain branches, mostly manufacturing, for the corporate sector and for the total economy. In order to estimate consumption of fixed capital, some assumptions are required concerning survival curves of various fixed assets. For this purpose the HCSO plans a small sample survey in 1997 of a few hundred large enterprises.
to be conducted by interviewers. The new estimates of the housing stock and the stock of fixed assets of government and the related consumption of fixed capital are the first steps in this project.

A major task for the coming years is the development of *quarterly national accounts*. There is a pressure from users to publish some selected aggregates of the national accounts quarterly. Experimental calculations have started in order to compile the major expenditure components and work will continue in this area. Some first tentative results were released by mid-1996 as volume growth rates for total GDP, household consumption expenditure, gross fixed capital formation and exports and imports of goods and services. The experimental methodology will be described in a forthcoming OECD publication on Quarterly National Accounts in Central and Eastern Europe.

Users have expressed strong interest in *regional accounts* and have requested the development of such estimates. Some research work has therefore been initiated in this area, and the first results have been published. The methodology for these experimental calculations is described in Chapter 7. However, this is only the first step: to investigate the possibilities of developing regional accounts by exploring existing data sources. To develop regional accounts in line with European Union guidelines will require more work both with regard to improving the methodology and new data collection.

For the analysis of the transition process, a more *complete and consistent set of data on privatisation* is needed. As mentioned in Chapter 6, a consistent treatment of privatisation in the HNA is not possible at present because of lack of data. There are is also a need to *develop financial accounts and balance sheets*. 
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Conventional signs used in the tables:

.. Not available.
- Nil or negligible.