HUNGARIAN CENTRAL STATISTICAL OFFICE

National accounts of Hungary, 1995–2014

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Foreword

Since the first compilation of the annual national accounts of Hungary this has been the 21st publication, which includes the most important macro-economic data. Taking into account that retrospective methodological changes were introduced in the calculations, the publication contains detailed data for 20 years (1995–2014) in user-friendly, table (Excel) format.

The many different tables in the publication can be accessed using the links in the table of contents. The data in this publication are also available on the HCSO website: in STADAT tables, in the Dissemination database and on the ESA2010 sub-page.

The reasons for the changes in the calculations are the following:

– methodological changes required by Eurostat when checking GNI reports,
– inclusion of routine revisions and corrections of errors, as well as of changes in the data sources used for the calculations.

Methodological changes are described in detail under Methodological notes. Concepts and general methodological notes are available in the publication titled "National accounts of Hungary, 1995–2007" and in the Meta-database on the HCSO website.

As the data sources used for the calculations are only partly available at the time when the preliminary national accounts of 2014 are compiled, all the data for the year 2014 are preliminary ones, they may change in the future. The data for 2014 contain not only the impact of methodological changes but also the differences between quarterly and annual calculations. The national accounts for 2014 compiled on the basis of comprehensive information will be published at the end of September 2016.

The calculations of the data in this publication were completed on 21 October 2015.

Methodological notes

The publication contains the 2nd preliminary data for the year 2014 and the finalised data for the year 2013 of the national accounts of Hungary. The accounts were compiled in line with the ESA2010 methodology, introduced in 2014. Information on the introduction of ESA2010 is available at the ESA2010 page (http://www.ksh.hu/esa2010). The reasons for the changes in the calculations are the following:

– methodological changes in the case of own account software and databases, originals, estimation of VAT fraud and non-observed economy affected by deliberate misreporting, improvements in the method of estimation of dwelling services, and illegal activities (smuggling), as required by Eurostat when checking GNI reports,
– corrections of errors, as well as changes in the data sources used for the calculations.

As the data sources for 2014, necessary for the calculations, were not fully complete at the time of compiling the preliminary national accounts in our publication, all the data for 2014 are preliminary ones, the finalised data may be different from these. In addition to the effect of methodological changes the data for 2014 contain the differences between quarterly and annual calculations. The national accounts for the year 2014 compiled on the basis of comprehensive information will be published at the end of September 2016.

1. Total effects of changes introduced in 2015 on GDP and GNI

Table 1

Effects on GDP

Year	Published in September 2014	Published in September 2015	Differences		Published in September 2014	Published in September 2015
	at current prices, billion HUF			%	volume indices, previous year=100.0	
1995	5,803.9	5,808.0	4.1	0.1	–	–
1996	7,090.3	7,095.8	5.5	0.1	100.0	100.0
1997	8,792.2	8,803.5	11.3	0.1	103.4	103.4
1998	10,408.9	10,423.2	14.3	0.1	104.2	104.2
1999	11,612.1	11,628.0	15.9	0.1	103.2	103.2
2000	13,293.6	13,310.4	16.8	0.1	104.2	104.2
2001	15,336.6	15,371.9	35.3	0.2	103.7	103.8
2002	17,371.3	17,410.0	38.7	0.2	104.5	104.5
2003	19,007.4	19,065.7	58.3	0.3	103.8	103.8
2004	20,914.6	21,012.8	98.2	0.5	104.8	104.9
2005	22,331.3	22,459.2	127.9	0.6	104.3	104.4
2006	24,034.6	24,138.8	104.2	0.4	104.0	103.8
2007	25,446.9	25,538.6	91.8	0.4	100.5	100.4
2008	26,949.3	27,038.1	88.8	0.3	100.9	100.8
2009	26,174.9	26,258.7	83.8	0.3	93.4	93.4
2010	26,946.0	27,051.7	105.7	0.4	100.8	100.7
2011	28,035.0	28,133.8	98.8	0.4	101.8	101.8
2012	28,548.8	28,627.9	79.1	0.3	98.5	98.3
2013	29,846.3	30,065.0	218.7	0.7	101.5	101.9

Table 2

Effects on GNI

Year	Published in September 2014	Published in September 2015	Differences	
	at current prices, billion HUF			%
1995	5,620.0	5,624.1	4.1	0.1
1996	6,829.3	6,834.8	5.5	0.1
1997	8,334.6	8,345.9	11.3	0.1
1998	9,846.4	9,860.7	14.3	0.1
1999	10,970.8	10,986.7	15.9	0.1
2000	12,654.2	12,670.9	16.8	0.1
2001	14,586.6	14,621.8	35.3	0.2
2002	16,495.3	16,534.0	38.7	0.2
2003	18,154.1	18,212.4	58.3	0.3
2004	19,877.2	19,903.6	26.4	0.1
2005	21,192.5	21,246.6	54.1	0.3
2006	22,827.8	22,902.6	74.9	0.3
2007	23,784.4	23,853.3	69.0	0.3
2008	25,292.6	25,381.4	88.8	0.4
2009	24,981.3	25,065.1	83.8	0.3
2010	25,688.3	25,794.0	105.7	0.4
2011	26,690.1	26,766.5	76.4	0.3
2012	27,331.6	27,399.0	67.4	0.2
2013	28,980.6	29,206.6	226.0	0.8

2. Main reasons for changes of national accounts data

1. Recommendations of Eurostat coming from checking GNI reports.
2. Routine revisions (finalisation of annual data, integration of supply and use tables, data corrections).

2.1. Impacts of recommendations of European Union coming from checking GNI reports

2.1.1. Own-account software and databases

The methodology remained unchanged in 2015, however, the basic data sources used for estimation were updated for the year 2013.

Table 3

Impact of new methods of estimating own-account software and databases on GDP

Item	2013
Change of GDP at current prices, million HUF	3,563
Change as % of GDP	0.012

2.1.2. Originals

Estimation methods of the capital formation of television and radio programme originals were improved.

According to the methodology of national accounts the production of originals has to be accounted at market prices. Changes were made in the calculation method of the mark-up ratio, which is needed to achieve market price, in line with the international methodological guidelines: a positive

mark-up ratio was introduced for market producers and a zero mark-up ratio for non-market producers. The changes were applied for the whole time series. To estimate originals the sector classification of some institutional units was modified for the period between 2003 and 2009 in accordance with the sector classification requirements of national accounts. In addition to the methodological changes, data corrections were made for 2011–2013.

Table 4

Change of GDP due to improved calculation of originals

Item	2010	2011	2012	2013
Change of GDP at current prices, million HUF	7,957	7,261	8,235	9,829
Change as % of GDP	0.030	0.026	0.029	0.033

2.1.3. Estimation of VAT fraud and non-observed economy affected by deliberate misreporting

Commission Decision 98/527/EC requires the estimation of VAT fraud without complicity. To meet this requirement, the methodology of VAT fraud estimation has been developed for the non-financial corporations sector. The estimation of VAT fraud for the households' sector and of the total non-observed economic performance affected by deliberate misreporting (N6 category of non-observed economy) was introduced into national accounts by the Hungarian Central Statistical Office in 2011.

The above-mentioned Commission decision determines two types of VAT fraud: with and without complicity. VAT fraud without complicity occurs when the buyer pays the VAT, which the seller does not pay to the tax authority but which raises its operating surplus. This unpaid VAT is included in the output as well as in the gross value added and is part of N6 as well.

The total methodology of the N6 estimation for the non-financial corporations sector was also revised as a part of this project. The data sources of the estimation are the Business Register (BR) of HCSO, the VAT returns database, the combined database of annual structural business statistics and of corporate tax returns, and the results of anonymised legally binding VAT audits of non-financial corporations, covering the period of 2009–2012.

A detailed estimation based on individual data was made on the basis of the available data sources. The result of the methodological change was backcasted to 1995.

Steps of the estimation process:

– Estimation of a theoretical VAT. This amount would be received if all units in the economy paid VAT on all items taxable under VAT according to the legislation in force. It was calculated using the supply and use tables (SUT) for 2010. The total value of VAT fraud is the difference between theoretical and actual VAT receipts.
– The total population of VAT-evading corporations was estimated by the kNN (*k Nearest Neighbour algorithm*) method.
– The breakdown of VAT fraud by industries was estimated by linear regressions fitted for previously determined branch groups, and the total amount of VAT fraud was broken down by branches according to these results.
– VAT fraud by industries was divided into VAT fraud with and without complicity. The cluster analysis of corporations audited by tax authority and proved as VAT evaders was made based on the parameters determined by our researches in this field.

– VAT fraud with complicity is solely related to sales to households, while VAT fraud without complicity may occur during the accounting of output and intermediate consumption as well. VAT fraud items related to output and intermediate consumption were calculated based on inter-relations in the input-output tables compiled for 2010.
– The economic performance – of corporations not subject to VAT – not observed due to under-reporting was estimated on the basis of the economic performance – of corporations subject to VAT – not observed due to tax evasion.

Table 5

Impact of new estimation of N6 on GDP

Item	2010	2011	2012	2013
Change of GDP at current prices, million HUF	97,120	90,743	89,513	120,202
Change as % of GDP	0.360	0.324	0.314	0.403

2.1.4. Improvements in method of estimation of dwelling services

As a result of revising the estimation of dwelling services, the costs of maintenance and repairs paid by tenants in the case of privately rented dwellings are accounted as household final consumption expenditure from 2014.

This methodological change had an effect on the split of the items related to maintenance and repairs of owner-occupied dwellings, holiday homes, garages and privately rented dwellings. The changes affected the value of output and intermediate consumption to different extents, which led to the increase of gross value added. Besides, some data corrections were made for the items of household final consumption expenditure. Corrections were backcasted to 2002 in the calculations.

Table 6

Impact of change in estimation of dwelling services on GDP

Item	2010	2011	2012	2013
Change of GDP at current prices, million HUF	591	814	569	–3,765
Change as % of GDP	0.002	0.003	0.002	–0.013

2.1.5. Illegal activities – smuggling

In the estimation of tobacco smuggling the estimation of the import price of smuggled tobacco was updated for 2013, in accordance with the modification in the basic data source used.

Table 7

Impact of data updating in estimation of tobacco smuggling on GDP

Item	2013
Change of GDP at current prices, million HUF	4,720
Change as % of GDP	0.016

2.2. Routine revisions (finalisation of annual data, integration of supply and use tables, data corrections)

The finalisation of the year 2013 data, the integration of the year 2012 supply and use tables and changes due to other data corrections also modified the value of gross domestic product.

Table 8

Impact of routine revisions and other data corrections on GDP

Item	2010	2011	2012	2013
Change of GDP at current prices, million HUF	0	–25	–19,228	84,197
Change as % of GDP	0.000	0.000	–0.067	0.282

Explanation of symbols:

(–)	=	non-occurrence
(..)	=	not available
(x)	=	not applicable
(empty space)	=	block of not applicable items
(0)	=	less than half of unit

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