

E Extraordinary and Standard Revisions to Annual National Accounts

On 30 September 2011, the Czech Statistical Office published its extraordinary and standard revisions to annual national accounts for the period 1995–2009, including a preliminary version of the annual national accounts for 2010. At present, the data from quarterly national accounts are not compatible with the annual data. They will be harmonised as part of the publication of quarterly national accounts on 9 December 2011.

In creating national accounts, a great many methodological improvements were made in the collection and processing of data as well as of course at the level of individual methods for estimates based on the given data. The most substantial changes as regards the data stated below include the following:

- national concept of import and export of goods: Delimitation of import and export flows based on “across-the-border” statistics, for which the crossing of state borders is a criterion for including a transaction under foreign trade, did not correspond to the national accounts concept, for

change of owner is necessary for the subject of a transaction to be regarded as part of foreign trade.

- imputed rents: Due to exceeding the 10% limit of housing rented on the market, it has been necessary since 2007 to switch to a method of imputing market rents. The method based on costs, which was used in previous years, was refined.
- capitalisation of software produced at one’s own expense: All software of a value exceeding ECU 500 is now recorded as part of gross fixed capital formation.
- individual housing construction: The method for estimating individual housing construction has been improved.

The Czech Statistical Office has provided very detailed information on other changes as part of its report on the extraordinary and standard revisions of annual national accounts to which we refer readers. Below we comment on the most significant changes made in annual national accounts.

E.1 Nominal GDP – Expenditure and Income Structures

Tables E.1.1 and E.1.2 record the expenditure and income structures of GDP at levels and rates of growth. The nominal GDP level in individual years was increased overall, and the relative deviations of new and original values fluctuated in the range of 2.9%–4.7%. Considering that a large proportion of the methodological changes were applied throughout the monitored time period, the impacts on nominal GDP’s growth rate are relatively low (from –1.1 p.p. to 0.7 p.p.). The extreme values belong to the last two years included in the extraordinary revision when the level of foreign trade changed greatly.

The level of household consumption was made higher for the entire monitored period. The switch to the method of imputed rents and the improvement of the outlay method for recording rents were particular contributing factors. Changes in level fluctuated between 1.9% and 5.6%. Changes in growth rates of nominal household consumption are in a range of –1.0 p.p. to 1.0 p.p.

Substantial changes occurred in gross fixed capital formation due to software capitalisation, changes in estimates in individual housing construction and, last but not least, the balancing of commodities flows in tables of supplies and use which were significantly

influenced by the change in how foreign trade is recorded. Changes in levels fluctuate from 4.1% to 17.9%. The largest changes can be found precisely in the last years of the sample when the largest changes in foreign trade also took place (see below). Changes in growth rates fluctuate from –2.2 p.p. to 5.0 p.p. The stated changes in gross fixed capital formation, together with changes in inventories, led to growth in the level of gross capital formation, and the largest changes again can be seen in the last years of the period.

The switch to the national concept of foreign trade led to a drop in the levels of imports and exports. Changes in the levels of exports fluctuated between –11.8% and 0.4% and changes in the levels of imports between –9.7% and –0.8%. The impact on the overall balance was entirely negative in all years. Impacts on the growth rate of imports and exports are more significant since 2004.

As regards income structure of GDP, the largest changes were unequivocally seen in the gross operational surplus, relative changes in which fluctuated between 6.9% and 11.1%. Changes in growth rates fluctuated between –2.6 p.p. and 2.4 p.p.

Table E.1.1 Nominal GDP – levels

		1995	2000	2005	2006	2007	2008	2009	2010
Gross domestic product	<i>bill. CZK</i>	1534	2270	3116	3353	3663	3848	3739	3775
	<i>change against the original value in %</i>	4.6	3.7	4.4	4.0	3.6	4.3	3.1	2.9
Private consumption	<i>bill. CZK</i>	788	1179	1538	1629	1748	1883	1880	1900
	<i>change against the original value in %</i>	5.6	2.6	5.0	4.3	3.6	2.7	2.3	1.9
Government consumption	<i>bill. CZK</i>	309	460	667	694	726	759	810	808
	<i>change against the original value in %</i>	0.8	-0.2	1.4	1.0	1.2	0.9	1.3	1.0
Gross capital formation	<i>bill. CZK</i>	493	679	826	928	1092	1114	898	947
	<i>change against the original value in %</i>	3.2	5.3	7.8	7.5	14.3	19.3	13.9	14.3
–Gross fixed capital formation	<i>bill. CZK</i>	483	652	805	860	990	1031	927	923
	<i>change against the original value in %</i>	4.5	6.5	8.5	8.0	11.2	16.8	13.9	17.9
–Change in stocks and valuables	<i>bill. CZK</i>	8	24	18	65	98	79	-33	20
	<i>change against the original value in bill. CZK</i>	-8	-9	-6	-2	34	29	-7	-26
External balance	<i>bill. CZK</i>	-56	-49	85	101	97	92	151	121
	<i>change against the original value in bill. CZK</i>	7.9	17.5	-9.6	-9.3	-78.4	-76.0	-50.0	-54.3
–Exports of goods and service	<i>bill. CZK</i>	742	1392	2026	2269	2527	2508	2257	2592
	<i>change against the original value in %</i>	-0.3	0.3	-6.0	-7.9	-10.7	-11.8	-10.0	-10.9
–Imports of goods and services	<i>bill. CZK</i>	797	1440	1941	2168	2429	2416	2106	2472
	<i>change against the original value in %</i>	-1.3	-0.9	-5.8	-7.8	-8.5	-9.7	-8.7	-9.6
Balance of taxes and subsidies	<i>bill. CZK</i>	139	186	283	287	327	335	325	334
	<i>change against the original value in %</i>	0.6	-0.6	0.8	0.7	0.7	0.7	0.9	0.3
–Taxes on production and imports	<i>bill. CZK</i>	179	246	353	364	407	419	425	434
	<i>change against the original value in %</i>	-0.4	-0.8	0.2	0.2	0.2	0.2	0.3	0.2
–Subsidies on production	<i>bill. CZK</i>	40	60	70	76	80	84	100	100
	<i>change against the original value in %</i>	-3.5	-1.3	-2.3	-1.5	-2.0	-1.7	-1.5	0.0
Compensation of employees	<i>bill. CZK</i>	620	915	1299	1394	1513	1617	1567	1577
	<i>change against the original value in %</i>	-1.6	-0.3	1.1	0.5	-0.2	-1.0	-2.5	-3.8
–Wages and salaries	<i>bill. CZK</i>	473	690	982	1053	1140	1226	1200	1195
	<i>change against the original value in %</i>	-2.2	-0.5	1.3	0.6	-0.4	-1.5	-3.5	-5.1
–Social security contributions	<i>bill. CZK</i>	147	225	316	341	373	390	367	382
	<i>change against the original value in %</i>	0.3	0.2	0.5	0.5	0.4	0.4	0.9	0.4
Gross operating surplus	<i>bill. CZK</i>	775	1169	1534	1672	1822	1896	1847	1864
	<i>change against the original value in %</i>	11.0	7.8	8.2	7.8	7.5	10.1	8.9	10.0
–Consumption of capital	<i>bill. CZK</i>	300	468	577	603	644	680	711	720
	<i>change against the original value in %</i>	1.2	3.7	4.1	4.6	5.3	6.4	8.6	9.0
–Net operating surplus	<i>bill. CZK</i>	475	700	958	1069	1178	1216	1137	1144
	<i>change against the original value in %</i>	18.1	10.7	10.8	9.7	8.8	12.3	9.1	10.7
Gross national income	<i>bill. CZK</i>	1534	2231	2985	3180	3401	3668	3489	3521
	<i>change against the original value in %</i>	4.8	4.3	4.7	3.9	3.4	4.1	2.3	2.7

Table E.1.2 Nominal GDP – growth rates

		1996	2000	2005	2006	2007	2008	2009	2010
Gross domestic product	<i>growth in %</i>	14.9	5.6	6.4	7.6	9.2	5.1	-2.8	1.0
	<i>change against the original value in p.p.</i>	0.1	0.4	0.4	-0.4	-0.5	0.7	-1.1	-0.2
Private consumption	<i>growth in %</i>	16.1	4.3	3.9	6.0	7.3	7.8	-0.2	1.1
	<i>change against the original value in p.p.</i>	-1.0	-0.1	0.6	-0.7	-0.8	-1.0	-0.3	-0.4
Government consumption	<i>growth in %</i>	11.1	4.5	5.9	4.0	4.6	4.6	6.6	-0.2
	<i>change against the original value in p.p.</i>	0.0	-0.1	0.0	-0.4	0.2	-0.4	0.5	-0.3
Gross capital formation	<i>growth in %</i>	20.7	15.0	4.0	12.4	17.6	2.0	-19.3	5.4
	<i>change against the original value in p.p.</i>	2.0	0.5	5.1	-0.2	6.9	4.3	-3.8	0.3
– Gross fixed capital formation	<i>growth in %</i>	16.9	9.9	6.0	6.9	15.0	4.2	-10.1	-0.5
	<i>change against the original value in p.p.</i>	-0.1	0.9	3.9	-0.4	3.2	5.0	-2.2	3.3
Exports of goods and services	<i>growth in %</i>	11.1	20.7	9.0	12.0	11.4	-0.7	-10.0	14.8
	<i>change against the original value in p.p.</i>	0.4	0.5	-0.1	-2.3	-3.6	-1.2	1.8	-1.2
Imports of goods and services	<i>growth in %</i>	14.8	23.6	5.9	11.7	12.1	-0.5	-12.9	17.4
	<i>change against the original value in p.p.</i>	0.6	0.3	1.5	-2.5	-0.8	-1.3	1.0	-1.2
Balance of taxes and subsidies	<i>growth in %</i>	18.0	4.3	5.0	1.5	13.9	2.5	-3.1	2.8
	<i>change against the original value in p.p.</i>	-0.3	-0.1	0.0	-0.2	0.1	-0.1	0.2	-0.6
– Taxes on production and imports	<i>growth in %</i>	13.3	3.0	6.5	2.9	12.0	2.9	1.4	2.1
	<i>change against the original value in p.p.</i>	0.0	-0.2	0.0	0.0	0.0	0.0	0.1	-0.1
– Subsidies on production	<i>growth in %</i>	-2.7	-0.8	12.6	8.6	4.8	4.4	19.5	-0.4
	<i>change against the original value in p.p.</i>	0.6	-0.6	0.4	0.8	-0.5	0.3	0.2	1.5
Compensation of employees	<i>growth in %</i>	17.5	6.2	7.2	7.3	8.6	6.8	-3.1	0.6
	<i>change against the original value in p.p.</i>	0.4	0.5	0.3	-0.6	-0.8	-0.9	-1.5	-1.4
– Wages and salaries	<i>growth in %</i>	17.7	5.7	7.3	7.2	8.3	7.5	-2.1	-0.4
	<i>change against the original value in p.p.</i>	0.6	0.6	0.4	-0.7	-1.0	-1.2	-2.1	-1.6
– Social security contributions	<i>growth in %</i>	16.6	7.6	6.7	7.8	9.4	4.7	-6.1	4.1
	<i>change against the original value in p.p.</i>	0.0	0.1	0.0	-0.1	-0.1	0.0	0.5	-0.5
Gross operating surplus	<i>growth in %</i>	12.2	5.4	6.0	8.9	9.0	4.1	-2.6	0.9
	<i>change against the original value in p.p.</i>	0.2	0.4	0.5	-0.4	-0.3	2.4	-1.1	1.0
– Consumption of capital	<i>growth in %</i>	11.1	7.3	3.6	4.6	6.8	5.6	4.5	1.4
	<i>change against the original value in p.p.</i>	1.6	0.3	0.5	0.5	0.7	1.1	2.1	0.4
– Net operating surplus	<i>growth in %</i>	12.9	4.1	7.5	11.6	10.3	3.2	-6.5	0.6
	<i>change against the original value in p.p.</i>	-1.0	0.6	0.4	-1.1	-0.9	3.2	-2.7	1.4
Gross national income	<i>growth in %</i>	13.8	5.5	7.0	6.6	6.9	7.8	-4.9	0.9
	<i>change against the original value in p.p.</i>	0.4	0.2	-0.2	-0.9	-0.4	0.7	-1.7	0.5

E.2 Real GDP – Expenditure Structure, Course of the Recession

Changes in real GDP growth rates are not dramatic; it fluctuates in a range of –0.5 p.p. to 0.6 p.p. Greater changes in growth rates can be seen in partial expenditure items, especially gross capital formation, exports, imports, and household consumption. Data are recorded in Table E.2.1.

Changes in growth rates of gross fixed capital formation fluctuate between –3.6 p.p. and 5.6 p.p. This is significantly reflected also in changes in growth rates of gross capital formation.

The revised data alter the perspective on the depth of the recession in 2009. According to new annual national accounts data, real GDP fell by 4.7% (versus the original 4.1%). Also according to new data, the impact of the foreign trade balance on the development of GDP in the same year was positive. This corresponds to the course of the recession in other neighbouring countries. The negative impact of gross capital formation was even stronger due to the

greater drop in gross fixed capital formation as well as the greater drop in inventories. Although the decline in household consumption was in fact 0.2 p.p. greater, it still applies that household consumption was not noticeably affected in 2009. The economic recovery in 2010 was slightly faster, as the economy grew by 2.7% (rather than the original 2.3%).

Economic cycle

The Hodrick–Prescott filter can be used to verify that the published extraordinary and standard revisions of annual national accounts have an entirely insignificant impact on the picture of the course of the economic cycle. A more detailed analysis of the course of the economic cycle including its determinants will be possible only after the revised quarterly data will be published.

Table E.2.1 Real GDP – growth rates

		1996	2000	2005	2006	2007	2008	2009	2010
Gross domestic product	<i>growth in %</i>	4.5	4.2	6.8	7.0	5.7	3.1	-4.7	2.7
	<i>change against the original value in p.p.</i>	0.5	0.5	0.4	0.2	-0.4	0.6	-0.5	0.4
Private consumption	<i>growth in %</i>	7.4	0.9	3.1	4.4	4.2	2.8	-0.4	0.6
	<i>change against the original value in p.p.</i>	-1.0	-0.4	0.6	-0.7	-0.8	-0.8	-0.2	0.4
Government consumption	<i>growth in %</i>	-1.2	0.0	1.6	-0.6	0.4	1.2	3.8	0.6
	<i>change against the original value in p.p.</i>	-0.3	-0.7	-1.2	-1.7	-0.1	0.1	1.2	0.7
Gross capital formation	<i>growth in %</i>	12.7	11.4	4.3	10.2	15.5	1.9	-20.8	5.9
	<i>change against the original value in p.p.</i>	1.1	0.8	5.1	0.5	6.1	4.7	-5.0	0.1
– Gross fixed capital formation	<i>growth in %</i>	9.1	6.5	6.0	5.8	13.2	4.1	-11.5	0.1
	<i>change against the original value in p.p.</i>	-0.8	1.4	4.3	-0.2	2.4	5.6	-3.6	3.2
Exports of goods and services	<i>growth in %</i>	6.5	17.3	11.8	14.0	11.3	3.9	-10.0	16.6
	<i>change against the original value in p.p.</i>	1.0	0.7	0.2	-1.8	-3.7	-2.1	0.7	-1.4
Imports of goods and services	<i>growth in %</i>	12.0	16.0	6.1	11.0	12.9	2.7	-11.7	16.2
	<i>change against the original value in p.p.</i>	0.0	-0.2	1.2	-3.3	-1.3	-2.0	-1.0	-1.8

E.3 Deflators of GDP and GDP Expenditures

Deflators of GDP and GDP expenditures also changed in connection with the change in nominal and real data. Table E.3.1 indicates that terms of trade recorded the largest changes in connection with changes in import and export deflators. Year-on-year changes in import and export deflators were generally increased

in the last 3 years of the extraordinary revision, and, with the exception of 2008, changes caused terms of trade to worsen. Changes in the growth of the terms-of-trade deflator fluctuated throughout the monitored period between –2.1 p.p. and 0.2 p.p.

Table E.3.1 GDP Deflators – growth rates

		1996	2000	2005	2006	2007	2008	2009	2010
Gross domestic product	<i>growth in %</i>	9.9	1.4	-0.3	0.5	3.3	1.9	1.9	-1.7
	<i>change against the original value in p.p.</i>	-0.5	-0.1	-0.1	-0.6	-0.1	0.1	-0.6	-0.6
Private consumption	<i>growth in %</i>	8.1	3.4	0.8	1.5	2.9	4.8	0.2	0.4
	<i>change against the original value in p.p.</i>	0.1	0.3	0.0	0.1	0.1	-0.2	-0.1	-0.8
Government consumption	<i>growth in %</i>	12.4	4.5	4.2	4.6	4.1	3.4	2.7	-0.8
	<i>change against the original value in p.p.</i>	0.3	0.6	1.3	1.5	0.3	-0.4	-0.7	-1.0
Gross fixed capital formation	<i>growth in %</i>	7.2	3.2	-0.1	1.0	1.6	0.1	1.6	-0.6
	<i>change against the original value in p.p.</i>	0.7	-0.5	-0.3	-0.2	0.7	-0.6	1.5	0.2
Exports of goods and services	<i>growth in %</i>	4.3	2.9	-2.5	-1.8	0.1	-4.5	0.0	-1.5
	<i>change against the original value in p.p.</i>	-0.6	-0.3	-0.3	-0.5	0.1	0.7	1.3	0.2
Imports of goods and services	<i>growth in %</i>	2.4	6.5	-0.2	0.7	-0.7	-3.1	-1.4	1.0
	<i>change against the original value in p.p.</i>	0.6	0.4	0.3	0.7	0.5	0.6	2.2	0.5
Terms of trade	<i>growth in %</i>	1.8	-3.4	-2.3	-2.4	0.8	-1.4	1.4	-2.5
	<i>change against the original value in p.p.</i>	-1.2	-0.6	-0.6	-1.2	-0.4	0.2	-1.0	-0.3