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IMPLEMENTATION REPORT**

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1. CHAPTER 1. OVERVIEW OF THE SYSTEM OF QUARTERLY NATIONAL ACCOUNTS

1.1 Organization and institutional arrangements

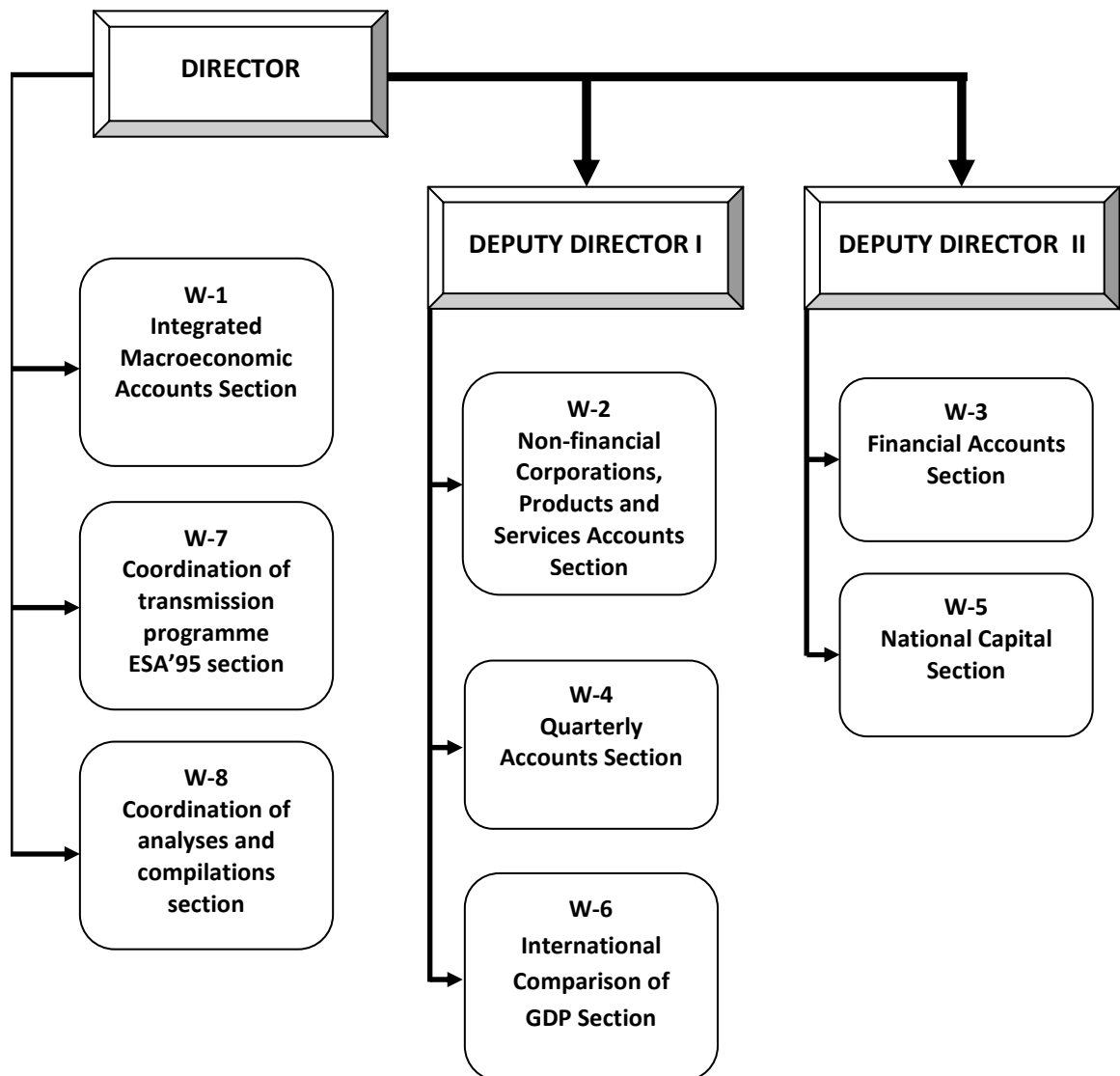
The quarterly accounts have been compiled by Central Statistical Office of Poland since 1995. The system of quarterly national accounts is based on the Council Regulation (EC) N° 2223/96 of 25 June 1996 on the European System of National and Regional Accounts (ESA '95). They are elaborated within National Accounts Division of CSO.

Quarterly National Accounts are calculated within quarterly national accounts unit. There are 3 people responsible for that. Besides, there is a close cooperation among other units within National Accounts Division to provide information for calculating GDP quarterly figures i. e.

- Financial accounts section – provides: information on final consumption expenditure of general government (P3, S13), output (P1) and intermediate consumption of general government sector and taxes on products (D.21),
- National capital section – provides information on outlays on tangible fixed assets and outlays on intangible fixed assets,
- Integrated macroeconomic accounts section – provides annual national accounts data for further revisions of quarterly figures.

A chart, presented below, shows the organization structure of National Accounts Division.

Structure of National Accounts Division



1.2 Publication timetable, revisions policy and dissemination of QNA

Regular dissemination of QNA is released 61 days after the end of reference quarter. It covers GDP expenditure, GDP production with full breakdown. The exact data is set up by CSO and published on CSO's Website.

Revisions take place with every new publication of annual data. Quarterly figures are also revised due to adopting a new methodology or a new accounting system.

1.3 QNA compilation approach

The quarterly accounts constitute an integral part of the national accounts system. The principals, definitions and statistical methods for compiling quarterly national accounts are similar to those used for the annual accounts. However, they differ with the way of using available statistical and administration data, due to the limited number of information.

The quarterly national accounts are consistent with annual accounts.

1.4 Balancing, benchmarking and other reconciliation procedures

The Polish quarterly national accounts system applies two approaches of calculating GDP – output and expenditure approach. The sources of information for these approaches are independent. In practice, a discrepancy is usually found between them. Output estimates are considered to have the higher reliability than expenditure approach due to more detailed sources of data. The balancing those two sides is based on adjusting expenditure side to output one.

The quarterly national accounts of GDP compose a complete set of accounts at macro level:

- production account by NACE rev.1.1 sections – the following items are calculated: gross output, intermediate consumption, gross value added and taxes less subsidies on products ,
- distribution account – the following items are calculated: individual consumption expenditures, general government and NPISHs consumption expenditures, gross capital formation, i.e.: gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables, foreign trade turnover i.e. exports and imports of goods and services.

Gross domestic product constitutes balancing item of production approach and is equal to sum of gross value added of all sections (divisions) of national economy, increased by taxes on products less subsidies on products.

1.5 Volume estimates

The volume estimates of QNA includes:

- data non-seasonally adjusted expressed at average constant prices of previous year,
- data non-seasonally adjusted expressed at constant prices with reference year 2000,

In order to derive volume estimates at constant prices of previous year quarterly data of analyzed year at current prices are deflated by Laspeyres Volume Index (previous year =100).

The procedure is basically the same for all components of the production side but different indexes for each section are applied. Gross value added is derived as the difference between output and intermediate consumption.

In order to derive chain-linked volume measures with the reference year 2000, the annual overlap method is used.

1.6 Seasonal adjustment and working day correction

In addition to non-seasonally adjusted data, seasonally and working day adjusted data are published. At the moment only data adjusted for seasonal and working day effects are available not separated. Seasonal adjustment is done with Tramo/Seats procedure within Demetra programme version 2.0. All series are adjusted using direct approach so aggregates are not calculated by summing up the several components. The data seasonally adjusted and trend-cycle data are presented at constant prices with reference year 2000 and at current prices.

1.7 Additional information

The publication time table for regular releases is available under:

http://www.stat.gov.pl/gus/45_1058_PLK_HTML.htm,

Results of quarterly GDP releases are available under:

http://www.stat.gov.pl/gus/45_1338_PLK_HTML.htm

The annual publication with methodological notes and tables is available under:

http://www.stat.gov.pl/gus/45_1334_ENG_HTML.htm

CHAPTER 2. PUBLICATION TIMETABLE, REVISION POLICY AND DISSEMINATION OF QNA

2.1 Release policy

The first release of quarterly GDP is published within 61 days after the end of reference quarter.

The calendar of the release is published on CSO's website:

www.stat.gov.pl/database/SDDS

When new annual data are available, quarterly figures are revised. There are three regular revisions of quarterly data. To sum up there are four regular release of quarterly data:

First release, within 61 days

Second release (for q1 and q2 year t)-September year t when annual GNI for year t-1 is available

(for q3 and q4 for year t)-May year t+1

Third release (for q1 and q2 year t)-May year t+1

(for q3 and q4 for year t)- September year t+1 when GNI for year t is available

Final release (q1-q4 for year t) – May year t+2 when final annual data for year t is available.

2.2 Contents published

The first release of QNA contains full set of information. It covers GDP expenditure and production approach at current prices and growth rates for non-seasonally adjusted series (year-on-year) and also seasonally adjusted series – values and growth rates (quarter-on-quarter). It covers the period of three years.

Actual press release of QNA is published at the CSO' website:

www.stat.gov.pl/gus/rachunki_narodowe

The following components of the GDP production approach are published in press release:

- gross value added,
 - of which:
- industry (C+D+E),
- construction (F)
- market services (G+H+I+J+K+O+P),
 - of which:
- trade and repair (G)
- transport, storage and communication (I),
- non-market services (L+M+N)

The following components of the GDP expenditure approach are published in press release:

- domestic demand
 - of which:
- final consumption expenditure,

- individual consumption expenditure,
- public consumption expenditure,
- gross capital formation,
- gross fixed capital formation,
- exports of goods and services,
- imports of goods and services.

For the categories, mentioned above, following time series are published: raw, seasonally adjusted and trend series. Non-seasonally adjusted data covers volume growth rates at average constant prices of previous year (the corresponding quarter=100), volume growth rates at constant prices with the reference year 2000 (the corresponding quarter=100 and the previous quarter = 100)) and volumes at current prices. For seasonally adjusted and trend data a percentage changes compared to the previous quarter are published. Additionally, a press release shows contribution to GDP volume growth rate.

2.3 Special transmission

More disaggregated series are sent to Eurostat and OECD organizations. The transmission includes industries classified according NACE rev.1 A17 – current, constant and chain-linked volumes, raw and seasonally adjusted. From expenditure side the transmission contains the quarterly aggregates mentioned plus gross fixed capital formation broken down by product Pi6 and imports and exports broken down by goods and services (non-seasonally adjusted data).

2.4 Policy for metadata

Information on methodology are available in the IMF's Special Data Dissemination Standard (SDDS) - see page:

<http://dsbb.imf.org/Applications/web/sddsctycatbaselist/?strcode=POL&streat=NAG00>

and in annual publication “Quarterly National Accounts” – see page:

http://www.stat.gov.pl/gus/45_1058_PLK_HTML.htm

Publication of quarterly aggregates

Code		Current prices		Constant prices				Seasonally adjusted data		Comments
		Time coverage	Transmission delay	Previous year prices		Chain-linked volumes (reference year = 2000)		Current prices	Chain-linked volumes (reference year = 2000)	
				Time coverage	Transmission delay	Time coverage	Transmission delay	Time coverage	Transmission delay	
B1G	1. Gross value added at basic prices	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
	Breakdown A17	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
D21-D31	2. Taxes less subsidies on products	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P119	3. FISIM	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
B1*G	4. Gross domestic product	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P3	5. Total final consumption expenditure	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P3	6. (a) Household final consumption expenditure	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P3	7. Final consumption expenditure of NPISH's	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P3	8. Government final consumption expenditure	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P31	(a) Individual consumption expenditure	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P32	(b) Collective consumption expenditure	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P4	9. Actual final consumption of households									
P41	(a) Actual individual consumption									

P5	10. Gross capital formation	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P51	a) Gross fixed capital formation	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
	Breakdown Pi6	2004-2007	T+61	2004-2007	T+61	2004-2007	T+61			
P52	b) Changes in inventories	1995-2007	T+61	1995-2007	T+61					
P53	c) Acquisition less disposable of valuables	1995-2007	T+61	1995-2007	T+61					
P6	11. Exports of goods (fob) and services	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
P7	12. Imports of goods (fob) and services	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	1995-2007	T+61	
B5	13. Balance of primary income with the rest of the world									.
B5*G	14. Gross national income at market prices									The data are estimated for institutional sectors at current prices only
K1	15. Consumption of fixed capital									See point B5*G
B5*N	16. Net national income at market prices									
D5, D6, D7	17. Net current transfers with the rest of the world									See point B5*G
B6N	18. Disposable income, net									
B8N	19. National saving, net									
D9	20. Net capital transfers with the rest of the world									See point B5*G
B9	21. Net lending or net borrowing of the nation									

CHAPTER 3. OVERALL QNA COMPILATION

3.1 Overall compilation approach

In GDP estimates direct method is applied based on statistical data from monthly, quarterly, semi-annual and annual reports and administrative sources.

The calculation of quarterly national accounts of GDP and its elements includes:

- non-seasonally adjusted data presented:
 - at current prices,
 - at average constant prices of previous year,
 - at constant prices with reference year 2000;
- seasonally adjusted data and trend – cycle data presented at constant prices with reference year 2000.

The estimates of quarterly GDP cover:

- production accounts (generation of GDP) by NACE rev. 1.1 sections – the following items are calculated: gross output, intermediate consumption, gross value added and GDP;
- distribution accounts of GDP – the following items are calculated: individual consumption expenditures, general government and NPISHs consumption expenditures, gross capital formation, i.e.: gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables;
- foreign trade turnover i.e. exports and imports of goods and services;
- non-financial quarterly accounts of GDP by institutional sectors expressed at current prices.

3.2 Balancing, benchmarking and reconciliation procedures

3.2.1 Quarterly GDP balancing procedure

The Polish quarterly national accounts system applies two approaches of calculating GDP – output and expenditure approach. The sources of information for these approaches are independent. In practice, a discrepancy is usually found between them. Output estimates are considered to have the higher reliability than expenditure approach due to more detailed sources of data. The balancing those two sides is based on adjusting expenditure side to output one.

3.2.2 Benchmarking of QNA and ANA

In Polish national accounts for certain variables the annual estimates are simply the sum of the quarterly figures, for example: exports, imports, changes in inventories. In this case there is no need to benchmark annual data. But in many cases, especially for those variables for which no quarterly data have been collected, there are annual surveys which influence quarterly estimates done before these surveys.

In Polish practice of alignment quarterly and annual figures manual approach is used. For each quarter of the year the ratio of the annual to the sum of the quarterly data is calculated. These ratios are then applied to the original quarterly series. To achieve balanced accounts the discrepancies appeared in cross - section dimension after applying above ratios are balance “by eye” with the use of expertise, intuition of compilers. They have wide perspective on the national accounts and have the knowledge how the economy is behaving.

First estimates of the year, which is the sum of four quarters is revised twice, i.e. in t+1 year and t+2 year. It influences quarterly data. A table below contains two versions of quarterly data in 2006: first estimates and after first revision of annual data – revised manually and with use of Ecotrim.

Quarterly data revision of 2006

Items	First estimates				Revised manually				Revised with Ecotrim			
	I Q	II Q	III Q	IV Q	I Q	II Q	III Q	IV Q	I Q	II Q	III Q	IV Q
GDP	105,5	106,0	106,3	106,6	105,4	106,3	106,6	106,6	104,0	105,7	106,3	108,5
Private consumption exp.	105,3	104,7	105,5	105,0	105,0	104,4	105,2	104,7	104,7	104,3	105,1	105,3
Public consumption exp.	106,6	103,4	103,0	102,6	108,6	105,3	104,9	104,5	106,6	104,9	105,1	106,6
Gross fixed capital formation	107,6	114,5	119,3	119,3	109,0	115,9	118,0	116,6	104,9	113,1	118,2	119,5
Inventories	81,4	-89,8	57,5	146,9	84,8	92,1	114,8	349,7	94,9	96,6	127,2	284,7
Exports	121,7	112,5	114,5	110,6	122,4	112,8	114,6	110,1	121,0	112,4	114,6	111,7
Imports	121,3	110,7	115,9	116,0	123,7	112,7	116,6	117,5	123,4	112,5	117,8	116,8

In the third column, there are growth rates calculated on the basis of data computed by Ecotrim.

These data were compiled in the following way:

1. In the first step new annual data at constant prices of previous year were disaggregated with related series (first estimates of quarterly data). AR(1) procedure was applied. These new time series (preliminary time series) fulfill temporal aggregation constraints.
2. In the second step multivariate method was used. Preliminary time series were disaggregated to fulfill not only temporal but also contemporaneous constraints. In this case Denton’s procedure was used.
3. On the basis of such computed data real growth rates were elaborated.

As the results show, there are quite a big difference between growth rates derived from data disaggregated manually and by means of Ecotrim, especially in the first and fourth quarter.

At the moment only manual calculation is used for balancing QNQ and ANA.

3.3 Volume estimates

3.3.1 Constant prices of previous year

Quarterly estimates of GDP as annual accounts-are elaborated according to ESA'95 both at current and constant prices of previous year. To compare quarterly data of two consecutive years, quarters of previous year (base year) are compiled at annual average prices of the same year.

To sum up, quarterly national accounts data are elaborated at:

- current prices;
- constant prices of previous year,
- annual average prices of the same year.

These two types of price indices, (previous year=100 and same year = 100) are elaborated by Trade and Service Division and Business and Prices Division.

To obtain data at constant prices of previous year, quarterly data of analyzed year at current prices are deflated by Laspeyres Volume Index (previous year =100). Data at annual average prices of the same year are elaborated by dividing data at current prices.

Volumes of quarterly GDP and its elements at current prices and constant prices of previous year are basis for estimations of volume index. Implicit price indices for GDP and its elements are achieved indirectly- value index is divided by volume index.

In quarterly national accounts value index is computed by dividing values at current prices from analyzed quarter and volumes from corresponding quarter of previous year at annual average prices of the same year.

Volume index is computed by dividing volumes of analyzed quarter at constant prices of previous year by volumes of corresponding quarter of previous year at annual average prices of the same year.

Each element of GDP is calculated at constant prices of previous year separately. It means that GDP at constant prices of previous year is the sum of aggregated elements from both side: production and expenditure.

The algorithm of quarterly GDP calculation at constant prices of previous year is following:

1. Elements of GDP (on the lowest level of aggregation) are compiled at annual average prices of the same year for all quarters of analyzed base year.

An example:

To compile individual quarters of base year 2006 at annual average prices of 2006, special price indices (year 2006 = 100) are used.

$$\text{For I quarter 2006} \rightarrow \frac{I \text{ quarter 2006}}{\text{year 2006}}$$

$$\text{For II quarter 2006} \rightarrow \frac{II \text{ quarter 2006}}{\text{year 2006}}$$

$$\text{For III quarter 2006} \rightarrow \frac{III \text{ quarter 2006}}{\text{year 2006}}$$

$$\text{For IV quarter 2006} \rightarrow \frac{IV \text{ quarter 2006}}{\text{year 2006}}$$

Such kind of indices ensure coherence and additives of quarterly data with annual data for 2006, i.e. sum of quarterly data at annual average prices of 2006 is equal to sum of quarterly data at current prices.

2. Elements of GDP (on the lowest level of aggregation) are compiled at constant prices of previous (base) year for analyzed quarter.

It means that for example for I quarter of 2007 base year is 2006 and compilation at constant prices of 2006 are carried with the use of special indices (Laspeyres Volume Indices):

$$\text{For I quarter 2007} \rightarrow \frac{I \text{ quarter 2007}}{\text{year 2006}}$$

Data at current prices for I quarter of 2007 are divided by this index.

3. Volume index compilation of GDP and its elements by dividing real volumes for I quarter of 2007 (see point 2) by volumes at annual average prices of 2006 for I quarter of 2006 (see point 1);

4. Price index is received as a quotient of value index and volume index.

For example, for I quarter of 2007

$$\text{Value index} = \frac{I \text{ quarter 2007 at current prices}}{I \text{ quarter 2006 at annual average prices of 2006}}$$

$$\text{Volume index} = \frac{\text{I quarter 2007 at constant prices of 2006}}{\text{I quarter 2006 at annual average prices of 2006}}$$

Each element of GDP is calculated at constant prices of previous year according to this algorithm, but different price indices are used for individual elements.

For production side of GDP each section is compiled at constant prices of previous year with use double deflation, i.e. gross output and intermediate consumption are compiled separately. Gross value added at constant prices of previous year is the difference between gross output and intermediate consumption expressed at constant prices of previous year.

Individual components of gross output, except trade margin (revenues from the sale, value of changes in inventories of work-in-progress, finished products, etc.) for section C, D, E, F, I are compiled at constant prices of previous year using:

- price index of sold production of Mining and quarrying for section C;
- price index of sold production of Manufacturing for section D;
- price index of sold production of Electricity, gas and water supply for section E;
- price index of construction and assembly production for section F;
- price index of transport, storage and communication for section I.

For other section price indices of consumer goods and services, corresponding to each section are applied. Trade margin for each section is deflated by price index of consumer goods and service for total economy.

Because of lack price indices for elements of intermediate consumption (i.e. materials, energy, external services, costs of business trips, other costs) special method of deriving price indices has been elaborated. The basis for this method is simplified input-output table.

For example to elaborate price index for intermediate consumption in each section for second quarter of 2007 following steps are done:

1. Individual goods and services (according to classification of product by activity CPA) in input-output table for 2006 at current prices are added to receive these five elements of intermediate consumption (materials, energy, etc.)
2. Individual goods and services in input-output table for 2006 at current prices are multiplied by quarterly price index (2007/2006) to achieve values at prices of 2007.
3. Individual goods and services at prices of 2007 are added to get five elements of intermediate consumption (materials, energy, etc.) at prices of 2007.

4. At the end each element of intermediate consumption at current prices of 2007 is divided by corresponding element at prices of 2006. As a result price indices (2007/2006) for each element of intermediate consumption are received.

With use of such elaborated indices, each elements of intermediate consumption is calculated at constant prices of previous year. Intermediate consumption for each section is equal to a sum of these five elements.

Taxes less subsidies on products are compiled at constant prices of previous year in different way than gross output and intermediate consumption. In these compilation deflation by an implicit price index and extrapolation by implicit growth rate are used. VAT, excise, duties and border taxes are extrapolated in order to eliminate the influence of changes in tax rates on GDP volume growth rate. Subsidies are deflated into constant prices. Volumes in previous year at average constant prices of the same year are the basis for VAT, excise, duties and border taxes calculation at constant prices. For subsidies, volumes in analyzed period at current prices are the basis for the calculation. VAT is extrapolated by growth rate of gross value added, excise by growth rate of income from sale in non-financial corporations sector, duties and border taxes are extrapolated by imports growth rate. Subsidies are deflated by implicit price index of gross value added.

3.3.2 Chain-linking estimates with the reference year 2000

The difference in aggregate values between two time periods is due to changes in quantity and changes in prices. In a lot of cases, the users of economic data are interested in understanding the degree to which economic growth between two periods is being driven by changes in quantities as distinct from changes in prices. This need for a measure of economic growth due only to changes in quantities has resulted in development of two methods in which the effects of prices changes are removed: constant price estimates and chain volume measures. In both methods prices of goods and services are kept constant.

The current value of each transaction can be expressed as a quantity multiplied by price. To produce constant price estimate current price is replaced with the corresponding price in a base period. First method has some disadvantages. It assumes that the price relatives (i.e. the ratios of the prices of commodities to the prices of other commodities) of goods and services are constant. However, in reality, this is not the case. Some prices increase faster than others and vice versa. That's why constant price estimates usually become less accurate the further the current period is from the base period. Due to this second method was elaborated. Chain volume measures value quantities by using prices in a base period which is updated annually.

This annually rebased volume change measures are then linked together to produce a time series at prices of the selected reference year. In comparison with fixed base year method chain volume measures provide better indicators about the whole economy because they take into account changes in price relatives that occur from one period to the next.

In Polish practice of quarterly national accounts, which are compiled starting from 1995 calculation at constant prices of fixed year are not done. From the beginning of elaboration of QNA two types of data were published: data at current prices and constant prices of previous year. Chainlinking was introduced to QNA in 2004. First chain volume measures were sent to Eurostat in August 2004 both with seasonally adjusted data. A reference year was then 1995. In chainlinking quarterly economic series annual overlap method is used. It depends on chaining 4 links previously calculated for a particular year t by multiplying them by the annual chain index of the previous year t-1. In this step 4 quarterly chain index are calculated, which on average, coincide with the annual chain index.

For calculating quarterly chain volume measures with reference year 1995 an algorithm described in “Manual for quarterly national accounts: concepts, data sources, and compilation” released by IMF. There are 4 steps in compilation chain volume measures. Here is short table showing the algorithm of calculation quarterly chain volume measures for IQ1995-IV1997.

Quarterly chain volume measures of GDP (annual overlap method)											
		At constant prices of								Chain linked	
		1995		1996		1997		1998		1995=100	
Period	current prices	Level	volume index 1995=100	Level	volume index 1996=100	Level	volume index 1997=100	Level	volume index 1998=100	index	level
Q. I 95	76 012,1										76 012,1
Q. II 95	81 778,2										81 778,2
Q. III 95	86 713,7										86 713,7
Q. IV 95	92 717,9										92 717,9
I-IV 1995	337 221,9	337 221,9	100,00							100,00	337221,9
Q. I 96	93 207,8	82 266,4	97,58							97,58	82266,4
Q. II 96	101 404,5	88 980,4	105,55							105,55	88980,4
Q. III 96	107 274,0	91 796,8	108,89							108,89	91796,8
Q. IV 96	120 549,5	95 217,9	112,94							112,94	95217,9
I-IV 1996	422 435,8	358 261,5	106,24	422 435,8	100,00					106,24	358261,5
Q. I 97	113 958,3			103 450,2	97,96					104,07	87734,6
Q. II 97	124 055,8			110 399,4	104,54					111,06	93628,1
Q. III 97	129 974,6			113 039,7	107,04					113,71	95867,3
Q. IV 97	147 364,5			125 482,1	118,82					126,23	106419,5
I-IV 1997	515 353,2			452 371,4	107,09	515 353,2	100,00			113,77	383649,4
Q. I 98	134 931,9					125 641,5	97,52			110,94	93532,5
Q. II 98	144 618,7					132 144,7	102,57			116,69	98373,8
Q. III 98	151 670,5					135 811,3	105,41			119,92	101103,3
Q. IV 98	169 680,8					147 428,7	114,43			130,18	109751,8
I-IV 1998	600 901,9					541 026,2	104,98	600 901,9	100,00	119,44	402761,4
Q. I 99	146 227,6							141 990,6	94,52	112,89	95170,8
Q. II 99	159 035,6							151 450,7	100,82	120,41	101511,6
Q. III 99	167 959,7							157 652,3	104,94	125,34	105668,3
Q. IV 99	193 085,4							176 994,6	117,82	140,72	118632,7
I-IV 1999	666 308,3							628 088,2	104,52	124,84	420983,4

In first step there are compiled estimates for each quarter at the annual average prices of the previous year on the basis of quantities and prices. Annual data are the sum of the four

quarter. Because the information about quantities and prices is not at disposal in Polish QNA we deflate data at current prices by Laspeyres Volume Index and achieve data at constant prices of previous year. Data at constant prices are compiled in the same time as data at current prices and they are published in each quarterly press release of GDP. These type of data are the most common in Poland.

In second step constant price estimates for each quarter are converted into volume index with the average of last year, i.e. each quarter at constant prices of previous year is divided by average quarterly value at current prices for last year.

$$\text{Example: IQ1996} = [82266,4/(337221,9/4)]*100 = 97,58$$

In third step quarterly volume indexes are linked with shifting base and reference year 1995 using the annual indices as linking factors.

$$\text{Example IQ1998} = 97,52*113,77/100 = 110,94$$

In fourth step chain linked indexes are multiplied by the current price estimates of value in 1995 (for quarterly chain indexes it is the average quarterly value for 1995, for annual indexes – total value for 1995). In that way we achieve value at constant prices with reference year 1995.

$$\text{Example: IQ1999} = 112,89*[(337221,9/4)]/100 = 95170,8$$

Quarterly chain-linked data (1995 = 100)						
	GDP	Final consumption expenditure	Gross capital formation	Exports	Imports	GDP = sum of components
Period						
Q. I 95	76 012,1	60 939,4	12 085,7	18 027,8	15 040,8	76 012,1
Q. II 95	81 778,2	66 538,9	13 609,7	19 230,6	17 601,0	81 778,2
Q. III 95	86 713,7	68 189,8	15 943,5	20 069,7	17 489,3	86 713,7
Q. IV 95	92 717,9	71 180,4	21 475,7	20 905,8	20 844,0	92 717,9
I-IV 1995	337 221,9	266 848,5	63 114,6	78 233,9	70 975,1	337 221,9
Q. I 96	82 266,4	69 248,9	12 838,2	22 073,6	21 894,3	82 266,4
Q. II 96	88 980,4	69 638,7	18 519,3	22 533,6	21 711,2	88 980,4
Q. III 96	91 796,8	72 024,1	19 857,8	25 246,6	25 331,7	91 796,8
Q. IV 96	95 217,9	75 207,5	24 195,1	17 730,9	21 915,6	95 217,9
I-IV 1996	358 261,5	286 119,2	75 410,4	87 584,7	90 852,8	358 261,5
Q. I 97	87 734,6	74 375,5	14 173,5	23 805,4	24 639,1	87 715,3
Q. II 97	93 628,1	75 266,9	19 864,2	25 284,0	26 774,1	93 641,0
Q. III 97	95 867,3	76 504,4	22 636,7	23 779,4	27 186,0	95 734,4
Q. IV 97	106 419,5	77 903,6	34 586,3	25 441,5	31 701,3	106 230,1
I-IV 1997	383 649,4	304 050,4	91 260,7	98 310,2	110 300,5	383 320,8
Q. I 98	93 532,5	79 135,1	16 533,1	27 987,8	30 182,6	93 473,4
Q. II 98	98 373,8	79 916,1	22 303,7	28 663,7	32 552,5	98 331,0
Q. III 98	101 103,3	80 710,6	25 176,5	28 460,9	33 311,5	101 036,5
Q. IV 98	109 751,8	77 441,5	39 702,3	27 385,8	34 737,8	109 791,8
I-IV 1998	402 761,4	317 203,3	103 715,6	112 498,2	130 784,4	402 632,7
Q. I 99	95 170,8	83 738,7	16 785,5	26 104,3	31 891,8	94 736,7
Q. II 99	101 511,6	84 506,5	23 548,2	26 981,0	33 824,6	101 211,2
Q. III 99	105 668,3	83 065,9	26 761,4	28 950,7	33 132,6	105 645,3
Q. IV 99	118 632,7	81 812,4	42 806,8	27 633,0	33 297,1	118 955,2
I-IV 1999	420 983,4	333 123,4	109 901,9	109 669,1	132 146,0	420 548,4

Annual overlap method ensures coherence of chain - linked quarterly data with chain-linked annual data, i.e. sum of quarterly data is equal to annual data. However, non-additivity occurs in quarterly chain – linked time series. As it is shown in above table values of components

chain volume measures expressed in zloty terms do not generally add up to the zloty value of the aggregate chain volume measures. This additivity is only in the reference year (1995) and the one immediately after (1996). Choosing a reference year that is close to the current period reduces the impact of non-additivity.

In March 2006 the reference year 1995 was changed into 2000. To obtain chain-linked data with reference year 2000 two steps were done:

In I step each chain linked index (1995=100) was divided by chain linked index (1995=100) for year 2000.

For example:

Chain linked index (1995=100) for 2000 = 130,07

Chain linked index (2000=100) for IQ 1999 = $112,89 / 130,1 * 100 = 86,77$

In II step chain linked index (2000=100) is multiplied by the current price estimates of value in 2000 (for quarterly chain indexes it is the average quarterly value for 2000, for annual indexes – total value for 2000).

For example:

Total value of 2000 at current prices = 744621,8

Chain linked value (2000=100) for IQ 1999 = $[86,77 * (744621,8 / 4)] / 100 = 161527,0$

Quarterly chain volume measures of GDP (annual overlap method)								
	current prices	Chain linked index	Chain volume measures 1995=100	Chain linked index	Chain volume measures 2000=100	Volume growth rate at constant prices with reference year 1995 the same quarter of previous year =100	Volume growth rate at constant prices with reference year 2000 the same quarter of previous year =100	Volume growth rate at annual average prices of previous year the same quarter of previous year = 100
Period		1995=100		2000=100				
Q. I 95	76 012,1		76 012,1	69,3	129 038,1			
Q. II 95	81 778,2		81 778,2	74,6	138 826,6			
Q. III 95	86 713,7		86 713,7	79,1	147 205,1			
Q. IV 95	92 717,9		92 717,9	84,6	157 397,8			
I-IV 1995	337 221,9	100,00	337221,9	76,9	572 467,5			
Q. I 96	93 207,8	97,58	82266,4	75,0	139 655,3	108,2	108,2	103,5
Q. II 96	101 404,5	105,55	88980,4	81,1	151 053,0	108,8	108,8	105,7
Q. III 96	107 274,0	108,89	91796,8	83,7	155 834,1	105,9	105,9	107,4
Q. IV 96	120 549,5	112,94	95217,9	86,8	161 641,8	102,7	102,7	108,1
I-IV 1996	422 435,8	106,24	358261,5	81,7	608 184,3	106,2	106,2	106,2
Q. I 97	113 958,3	104,07	87734,6	80,0	148 938,1	106,6	106,6	107,1
Q. II 97	124 055,8	111,06	93628,1	85,4	158 942,9	105,2	105,2	107,7
Q. III 97	129 974,6	113,71	95867,3	87,4	162 744,2	104,4	104,4	107,0
Q. IV 97	147 364,5	126,23	106419,5	97,0	180 657,6	111,8	111,8	106,6
I-IV 1997	515 353,2	113,77	383649,4	87,5	651 282,9	107,1	107,1	107,1
Q. I 98	134 931,9	110,94	93532,5	85,3	158 780,7	106,6	106,6	106,6
Q. II 98	144 618,7	116,69	98373,8	89,7	166 999,2	105,1	105,1	105,4
Q. III 98	151 670,5	119,92	101103,3	92,2	171 632,9	105,5	105,5	105,0
Q. IV 98	169 680,8	130,18	109751,8	100,1	186 314,5	103,1	103,1	103,2
I-IV 1998	600 901,9	119,44	402761,4	91,8	683 727,4	105,0	105,0	105,0
Q. I 99	146 227,6	112,89	95170,8	86,8	161 561,9	101,8	101,8	102,2
Q. II 99	159 035,6	120,41	101511,6	92,6	172 325,9	103,2	103,2	103,5
Q. III 99	167 959,7	125,34	105668,3	96,4	179 382,3	104,5	104,5	105,4
Q. IV 99	193 085,4	140,72	118632,7	108,2	201 390,7	108,1	108,1	106,6
I-IV 1999	666 308,3	124,84	420983,4	96,0	714 660,9	104,5	104,5	104,5
Q. I 00	167 064,5	119,86	101050,9	92,2	171 543,8	106,2	106,2	106,0
Q. II 00	180 390,0	126,81	106911,1	97,5	181 492,2	105,3	105,3	105,2
Q. III 00	187 175,6	128,84	108621,5	99,1	184 395,7	102,8	102,8	103,3
Q. IV 00	209 991,7	144,77	122048,9	111,3	207 190,1	102,9	102,9	102,6
I-IV 2000	744 621,8	130,07	438632,4	100,0	744 621,8	104,2	104,2	104,2
Q. I 01	179 147,2	122,93	103633,1	94,5	175 927,4	102,6	102,6	102,3
Q. II 01	191 050,3	127,92	107842,1	98,3	183 072,7	100,9	100,9	101,1
Q. III 01	194 018,5	131,01	110452,4	100,7	187 503,9	101,7	101,7	100,9
Q. IV 01	214 988,7	144,26	121621,9	110,9	206 465,2	99,7	99,7	100,4
I-IV 2001	779 204,7	131,53	443549,5	101,1	752 969,2	101,1	101,1	101,1

Updating the reference year results in revisions to the levels of chain volume measures for their data series. However, re-referencing does not change growth rates. A comparison of the growth rates calculated on the basis of data with reference year 1995 and data with reference year 2000 shows that, they are the same.

Changing the reference year for whole series excluding quarters of 1995 was done according to these two steps mentioned earlier. Data for 1995 had to be recalculated in other way, because if we take for each quarter 1995 the chain linked index =100 and follow these two steps we will achieve the same values for each quarter of 1995. That's why at the beginning we calculated volume growth rate at constant prices with reference year 1995 (corresponding quarter of previous quarter =100). We assumed that at constant prices with reference year 2000 growth rates are the same. To get values at constant prices with reference year 2000 for quarters of 1995 each quarter of 1996 at constant prices with reference year 2000 was divided by growth rate.

Example:

Volume growth rate IQ1996 (reference year=1995) = 108,2 = Volume growth rate IQ1996 (reference year=2000)

Chain volume measures for IQ1995 (2000=100) = (139655,3/108,2)/100=129038,1

Quarterly chain-linked data (2000 = 100)						
	GDP	Final consumption expenditure	Gross capital formation	Exports	Imports	GDP = sum of components
Period						
Q. I 98	158 780,7	140 333,9	26 788,1	41 820,8	49 358,9	159 583,9
Q. II 98	166 999,2	141 718,9	36 138,1	42 830,8	53 234,5	167 453,3
Q. III 98	171 632,9	143 127,8	40 792,6	42 527,9	54 475,7	171 972,7
Q. IV 98	186 314,5	137 330,5	64 328,4	40 921,3	56 808,1	185 772,1
I-IV 1998	683 727,4	562 511,2	168 047,2	168 100,8	213 877,2	684 782,0
Q. I 99	161 561,9	148 497,7	27 197,0	39 006,5	52 154,0	162 547,2
Q. II 99	172 325,9	149 859,3	38 154,4	40 316,5	55 314,7	173 015,5
Q. III 99	179 382,3	147 304,5	43 360,7	43 259,7	54 183,2	179 741,7
Q. IV 99	201 390,7	145 081,7	69 358,6	41 290,7	54 452,1	201 278,9
I-IV 1999	714 660,9	590 743,2	178 070,7	163 873,4	216 104,0	716 583,3
Q. I 00	171 543,8	154 883,4	29 769,8	46 511,3	59 104,6	172 059,8
Q. II 00	181 492,2	152 933,5	40 263,1	50 077,8	61 654,0	181 620,4
Q. III 00	184 395,7	150 859,4	44 201,8	49 197,6	59 777,7	184 481,1
Q. IV 00	207 190,1	148 763,5	70 741,7	56 121,1	69 165,9	206 460,4
I-IV 2000	744 621,8	607 439,9	184 976,4	201 907,8	249 702,3	744 621,8
Q. I 01	175 927,4	157 130,9	26 449,8	48 976,1	56 629,4	175 927,4
Q. II 01	183 072,7	155 983,8	35 846,8	49 692,1	58 450,0	183 072,7
Q. III 01	187 503,9	154 936,2	38 026,4	56 260,5	61 719,2	187 503,9
Q. IV 01	206 465,2	152 924,9	59 868,6	53 274,9	59 603,2	206 465,2
I-IV 2001	752 969,2	620 975,8	160 191,6	208 203,6	236 401,8	752 969,2
Q. I 02	176 920,5	161 243,2	21 468,9	47 405,0	53 641,3	176 475,8
Q. II 02	186 619,9	159 878,0	33 593,1	54 170,7	61 194,7	186 447,1
Q. III 02	190 041,6	159 219,0	35 742,0	57 571,5	62 567,6	189 964,9
Q. IV 02	209 928,1	158 642,5	57 866,5	59 100,2	65 265,6	210 343,6
I-IV 2002	763 510,1	638 982,7	148 670,5	218 247,4	242 669,2	763 231,4

In compilation of data at constant prices with reference year 2000 occurred one problem. In the above table sum of components does not add up to total value of GDP in quarters of the reference year 2000. In the following year, i.e. 2001 sum of components is equal to total value of GDP. This impropriety can be eliminated by not using the described algorithm in 2000 but putting only volume measures at current prices for this year. This solution will not change other data in constant prices with reference year 2000.

3.4 Contributions to GDP volume growth rate

Component's contribution to real growth of GDP depends on both its share in value of GDP and its real growth in analyzed period. Small components can influence even stronger on GDP growth than bigger components. That's why impact scale of components on real growth of GDP is very useful analytical tool.

Contribution are calculated by dividing the level change of a component by the level change of GDP and multiplying by real growth of GDP. The formula is as follow:

$$\text{contribution to GDP growth} = \frac{\text{real change of component}}{\text{real change of GDP}} * \text{GDP growth in \%}$$

Contributions is calculated for GDP volume growth compared to the same quarter of the previous year. To calculate real change of each component value at constant prices of previous year and value at average constant prices of the same year is used.

For example, real change of gross fixed capital formation (GFCP) in first quarter of 2006 is the difference of value of GFCP for IQ2006 expressed at constant prices of 2005 and value of GFCP for IQ2005 expressed at average prices of 2005. It is important that in Polish practice to calculate real change or volume growth rate value at constant prices of the same year not current prices of this year is used. There is a difference between these two types of quarterly indices. They are the same only for annual data.

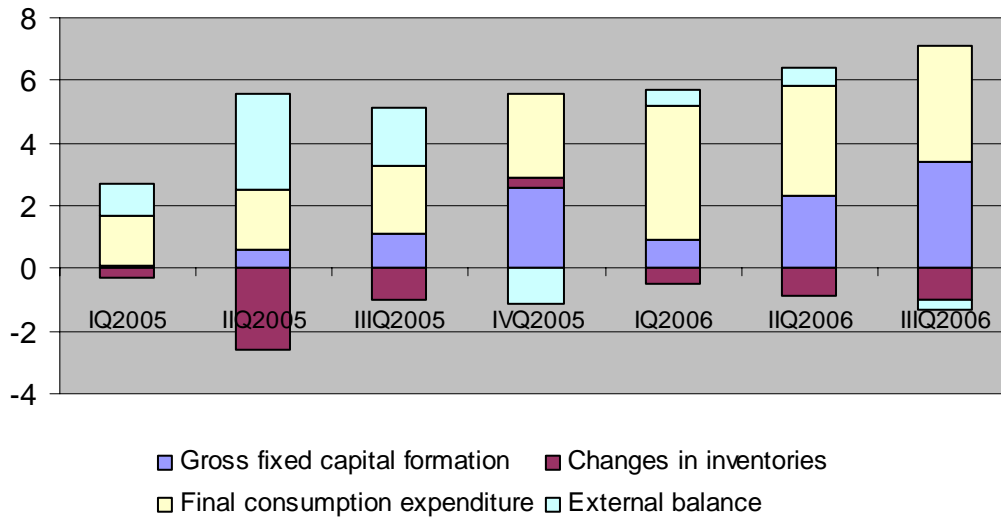
Contributions are expressed in percentage and their sum is equal to GDP growth in %. The table below shows percent distribution and contributions to GDP growth of major components for IQ2005- IIIQ2006.

	Percent distribution								Contribution to GDP growth							
	2005				2006				2005				2006			
	IQ	IIQ	IIIQ	IVQ	IQ	IIQ	IIIQ	IV Q	IQ	IIQ	IIIQ	IVQ	IQ	IIQ	IIIQ	IVQ
GDP in%	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	2,4	3,2	4,3	4,4	5,4	6,3	6,6	6,6
Domestic uses	100,0	100,3	100,7	100,4	100,9	101,3	101,8	101,5	1,4	0,0	2,5	5,5	5,8	6,4	7,5	9,3
Final consumption expenditure	85,6	84,3	82,3	73,4	86,5	83,8	81,5	71,2	1,6	2,0	2,4	2,6	5,0	3,9	4,2	3,4
Individual consumption expenditure	65,9	63,9	63,3	56,2	66,1	63,3	62,5	54,0	0,9	1,1	1,6	1,4	3,3	2,8	3,3	2,6
Gross capital formation	14,4	16,0	18,4	27,0	14,4	17,5	20,3	30,3	-	-	0,1	2,9	0,8	2,5	3,3	5,9
Gross fixed capital formation	12,2	15,6	17,3	26,3	12,6	17,2	19,1	28,2	0,1	0,7	1,1	2,6	1,1	2,5	3,1	4,3
Changes in inventories	2,2	0,4	1,1	0,7	1,8	0,3	1,2	2,1	-	-	-1,0	0,3	-	0,0	0,2	1,6
External balance	0,0	-0,3	-0,7	-0,4	-0,9	-1,3	-1,8	-1,5	1,0	3,2	1,8	-1,1	-	-	-0,9	-2,7
Exports	35,6	38,6	38,2	36,1	39,8	41,5	41,7	38,6	1,4	3,6	2,4	4,3	7,8	4,9	5,5	3,7
Imports	35,6	38,9	38,9	36,5	40,7	42,8	43,5	40,1	0,4	0,4	0,6	5,4	8,2	5,0	6,4	6,4
Gross value added	89,7	88,1	87,2	87,5	89,4	88,0	86,9	87,2	2,0	2,9	3,3	3,4	4,5	5,4	5,2	5,9
Taxes less subsidies	10,3	11,9	12,8	12,5	10,6	12,0	13,1	12,8	0,4	0,3	1,0	1,0	0,9	0,9	1,4	0,7

Contribution of external balance to GDP growth rate is calculated as a difference between exports and imports contribution. Other contribution are calculated on the basis of formula mentioned above.

Contribution to GDP growth are published in quarterly press release of GDP starting from I Q 2006. They are presented in similar table to this one shown here. From 1st January 2007 they are also included in Statistical Bulletin.

Contributions to GDP growth



Data shown in the above table prove the thesis that smaller components can have similar or even stronger influence on GDP growth than the bigger one. For example in Poland gross fixed capital formation, which have the share in GDP three times less at least than final consumption expenditure, contribute almost the same to overall GDP growth in fourth quarter of 2005 and third quarter of 2006.

3.5 Seasonal adjustment and working day correction

3.5.1 Seasonal adjustment

In Poland seasonal adjustment is done after chain-linking volume series. Also data at current prices are seasonally adjusted. Quarterly data are chain-linked with annual overlap method. This method implies a loss of additivity in cross-section dimension. No procedure is applied to force sub-aggregates to sum up to their higher aggregate. In Poland, direct approach for seasonally adjusted time series has been chosen. Consequently, GDP and its elements time series for production and expenditure side are adjusted separately. For this purpose Demetra – version 2.0 with TRAMO/SEATS procedure is applied.

Before seasonal adjustment is done time series are cleaned for special effects (Pre-Treatment):

- working/trading day effects;
- moving holidays;
- outliers.

During this process default settings of TRAMO/SEATS are used.

All calendar effects are tested for their significance before they are considered in the final estimation process for extraction. The calendar used is this one for Poland integrated in Demetra software package. In Polish practice, for trading day correction option 2 repressors is applied for each time series:

- 1st repressor considers just two types of days: working days from Monday to Friday and the day not worked, Saturday and Sunday;
- 2nd incorporates correction for the leap year.

Outliers effects are estimated by an automatic procedure implemented in the TRAMO/SEATS software package. The following outliers are tried to be located :

- additive outliers occurring as a effect of the event at one point in time;
- level shifts corresponding to a break in the average value of the series;
- transitory components describing a disruption with a return to the initial situation.

These outliers are detected according to a t-value criterion. The value of the t-value is determined automatically, unless test statistics concerning the reliability of the model can be significantly improved by clearing for more outliers.

The following quarterly data are published: seasonally adjusted series, raw data (unadjusted), seasonally adjusted (with working day correction) and trend.. In ESA transmission data at current prices seasonally adjusted are also sent. Every time a new quarter is calculated model for seasonal adjustment and its parameters are revised. Following seasonal adjustment process whole time series are changed.

3.5.2 Calendar adjustment

Calendar adjustment refers to the correction for calendar variations. Two different types of calendar effect can be distinguished:

- working/trading day effect;
- moving holidays.

Working day or trading day adjustment means correction raw series for differences in the number of working or trading days in a given period (quarter) which differ from year to year which and has impact upon the level of activity in that period. Daily composition of the quarter is not constant, even the length varies (Leap Year).

Moving Holidays, for example Easter, have also impact on some activities. Easter effect influences first or second quarter (falls in March or April).

Calendar adjusted series are derived from raw series after eliminating working day effect and Easter effect.

In Polish practice these two effects are estimated during seasonal adjustment using Demetra's default model. In the final Excel file two shifts are achieved: aggregate trading day effects(.pt) and Easter effect (.pse).

Depending on the relationship between the components in the original series, the mode of calendar adjustment may be additive or multiplicative. In case multiplicative model of the original series, quarterly calendar factors are ratios, with all positive values centered around unity. The purely calendar adjusted series are computed by dividing each quarter's original value by corresponding trading day factor and Easter day factor. In additive model quarter calendar factors represent positive or negative deviations from the original series and are centered around zero. The purely calendar adjusted series are computed by subtracting corresponding trading day factor and Easter day factor from each quarter's original value.

Period	Original series		Aggregate Trading Day Effects		Easter Effect		Calendar adjusted series	
	Final consumption expenditure	Construction	Final consumption expenditure	Construction	Final consumption expenditure	Construction	Final consumption expenditure	Construction
Q. I 95	107 945,9	6 805,0	0,9989	46,7367	1,0	0,0	108 064,4	6 758,3
Q. II 95	117 864,7	9 301,9	0,9967	-261,7256	1,0	0,0	118 256,2	9 563,6
Q. III 95	120 789,1	10 667,2	0,9986	-112,1681	1,0	0,0	120 960,9	10 779,4
Q. IV 95	126 086,5	13 217,6	0,9969	-243,0309	1,0	0,0	126 475,4	13 460,6
Q. I 96	122 665,1	6 389,0	1,0042	-65,4300	1,0	0,0	122 146,1	6 454,4
Q. II 96	123 355,6	9 494,5	0,9967	-261,7200	1,0	0,0	123 765,4	9 756,2
Q. III 96	127 581,0	11 358,6	0,9994	-46,7367	1,0	0,0	127 656,6	11 405,3
Q. IV 96	133 220,0	13 708,9	0,9969	-243,0309	1,0	0,0	133 630,9	13 951,9
Q. I 97	131 746,1	6 727,6	0,9964	-149,5575	1,0	0,0	132 219,3	6 877,2
Q. II 97	133 325,2	10 035,7	0,9983	-130,8628	1,0	0,0	133 546,5	10 166,6
Q. III 97	135 517,3	12 135,2	0,9994	-46,7367	1,0	0,0	135 597,6	12 181,9
Q. IV 97	137 995,8	17 006,3	0,9978	-177,5995	1,0	0,0	138 306,7	17 183,9
Q. I 98	140 177,2	8 242,5	0,9972	-84,1261	1,0	0,0	140 564,0	8 326,6
Q. II 98	141 560,6	11 229,6	0,9975	-196,2942	1,0	0,0	141 913,3	11 425,9
Q. III 98	142 968,0	13 935,4	1,0002	18,6946	1,0	0,0	142 934,1	13 916,7
Q. IV 98	137 177,1	16 461,0	0,9986	-112,1681	1,0	0,0	137 372,2	16 573,2

Above table is the example of the calculation calendar adjusted data for two time series: final consumption expenditure and construction. Components in final consumption expenditure time series are multiplicative, whereas in construction time series they are additive. In result, to achieve calendar adjusted series, original final consumption expenditure series is divided by trading day factor and Easter factor. In construction trading day factor and Easter effect factor were subtracted from the original series. Easter effect is equal to unit in final consumption expenditure time series and zero in construction time series. It means that there is no Easter effect. Among 32 seasonally adjusted time series 21 of them show the impact of trading day effect. None of 32 series shows Easter effect. Quarterly GDP time series has not got both trading day effect and Easter effect.

CHAPTER 4. GDP AND COMPONENTS: THE PRODUCTION APPROACH

From the production side of GDP following categories are calculated: gross output, intermediate consumption, gross value added and taxes on products and subsidies on products.

4.1 Gross value added

Estimates of GDP are compiled for sections and selected divisions of NACE rev.1.1 by size classes of units. Units are classified according to their predominant activity. Study covers all units of the national economy.

From the methodological point of view two groups of sections have been identified:

- **the market sections**
- **the non-market sections**

Each division and section of the NACE rev. 1.1, particularly the general government sector and financial corporations sector requires individual approach. Other sectors are also treated individually, sometimes it depends on the kind of activity (e.g. agriculture) or specificity of information (e.g. forestry, fishing, activities of households).

Industry (NACE C-E), Construction (NACE F), Trade and Repair (NACE G), Hotels and restaurants (NACE H), Transport, storage and communication (NACE I), Real estate, renting and business activities (NACE K), Other community, social and personal services activities (NACE O)

Estimations of value added for sections from C to K, O (without J and O91) do not cause major difficulties because statistical reports regarding these sections are sufficient. An algorithm similar to the one used in annual calculations can be used here, therefore there is no need to make significant adjustments.

The main data sources for these sections are:

- **quarterly, semi annual and annual reports on incomes, costs, financial results and investment outlays on fixed assets (F-01/I-01)** – all non-financial enterprises with more than 49 employees (large enterprises) are fully enumerated each quarter. For medium sized enterprises (10 – 49 employees) a sample is drawn each half year. Small enterprises (1-9

employees) are not registered in this report. Data are filled in cumulatively, the results for Q4 are automatically the yearly totals. Data are compiled by A60. On the basis of this output and intermediate consumption are calculated, and hence value added as residual. The survey is compulsory, and the data are available 45 days after the end of survey period.

- **monthly reports on economic activity (DG-1)** - the monthly report on economic activities concerning sales revenues of products, employment, wages and salaries, working time. Here a sample (10%) for large and medium sized enterprises is used. Data is again compiled by A60. This report forms the basis for monthly indicators but its results are linked to the quarterly data as well.

- **SP-3 Survey on economic activity enterprises (1-9 employees)**

Yearly report on economic activity of enterprise contains data on economic activity of small enterprises i.e. employing up to 9 persons. The following information is collected: number of employment and employees, wages and salaries, investment outlays, fixed assets, income tax, income and costs, value of inventories, information for trade activities: retail, wholesale and catering sales, number of retail sales outlets; information for transport activities, information for health care activities: number of consultations provided.

REGON (National Official Business Register) - REGON register is a set of information constantly actualized on subjects of national economy run as an IT system in the way of central database and local databases.

Estimates of gross output, intermediate consumption and gross value added in the market sections are performed with taking into consideration size classes of entities (enterprises) of the national economy. A unit's size is determined by the number of employees.

There are three categories of units in financial reports of enterprises: first - large units with more than 49 employees; second - medium size units with 10 to 49 employees and third - small units with up to 9 employees.

For units with more than 49 employees gross value added in consecutive quarters is calculated on the basis of quarterly financial statistical surveys conducted by the Central Statistical Office, mainly on the basis of reports on incomes, costs, financial results and investment outlays (F-01/I-01). Information about revenues from the sale of self-

manufactured products (goods and services), trade margin, changes in inventories and costs incurred to obtain revenue are starting point for the calculations.

Units with number of employees between 10 to 49 persons prepare monthly reports on economic activity DG-1 (sample survey) as well as semi-annual and annual reports F-01/I-01 on incomes, costs, financial results and investment outlays, which constitute the basis for calculating value added for those units in following quarters. On the basis of DG-1 global income from sale of goods and services is determined. F-01/I-01 is the basis for determining structure of income, relationship between income and costs and then overall size of costs and their structure, in other words, all elements that are necessary for calculating level and structure of gross output and intermediate consumption.

Data for units with employment below 10 persons is acquired from SP-3 annual sample survey. The basis for estimates is information about number of employees in this units and labour productivity in units with 10-49 employees within the same section (division) of activity.

Number of employees in this units is determined on the basis of a file, from the REGON system. To calculate gross value added on a yearly basis, one needs such information as structure of sales, sales-cost ratio, and structure of costs by type. This data is obtained on the basis of information about units which are as close in size to units with less than 10 employees as possible, that is units with 10-49 employees which submit the F-01 reports.

Within the market sections we can distinguish sections A, B, J and P estimates for which due to the specific kind of activity and data sources, are calculated in a slightly different way than for other sections in this sector.

Agriculture, hunting and foresting and Fishing (NACE A+B)

The main data sources for sections A and B are:

- R-10 Monthly report on procurement of major agriculture products,
- R-KSRA Survey on farm animal stock of cattle, sheep and poultry, and animal output (twice a year - in June and December)
- R-KSRB Survey on pig stocks and pork output (three times a year - April, August, December).

Due to specific character of production process in section A - agriculture, hunting and forestry, and in B - fishing, quarterly estimates of gross value added are usually calculated differently than in remaining areas of the market activity. Comparing to acquiring and selling of products, income labour and materials income tend to be distributed more evenly throughout the year (despite the fact that these costs are subject to significant seasonal fluctuations).

Gross value added for individual quarters is estimated on the basis of the data on animal stock of cattle and pigs, procurement of major agriculture products (cereal grains, potatoes, animals for slaughter, cow milk). These data are taken from: R-10 report, R-KSRA survey and R-KSRB survey. The number of agricultural holdings are not obtained from Agriculture Census. They are carried out every six year. The last one was in 2002. Since 2004 paid supplementary area have been included in gross output of household in agriculture in connection with joining EU. The estimations are revised every next year taking into account predictions of annual production elaborated by Agriculture and Food Economy Division.

Financial intermediation (NACE J)

In the Polish national accounts, the activities of **NACE J** appear only in accounts for two ESA 95 sectors: **financial corporations sector** and **general government sector**. They are distinguished in 3 main types of industries within the A60 headings: 65 – Financial intermediation, except insurance and pension funding, 66 – Insurance and pension funding, except compulsory social security, 67 – Activities auxiliary to financial intermediation.

The main data sources used in the process of compilation of quarterly non-financial accounts for financial corporations sector in Poland are the following:

- Quarterly and annual reports of central bank,
- Quarterly and annual reports of commercial banks,
- Insurance and Pension Funds Quarterly Bulletin and Yearbook,
- Report on financial results of brokerages,
- Report on financial results of investment fund corporation,
- Report on financial results of co-operative saving and credit unions
- Report on income, costs and financial results of companies

Quarterly and annual reports of central bank

Annual report of central bank contains accounting data (profit and loss accounts and balance sheets) from the National Bank of Poland provided on annual basis.

Quarterly report of central bank comprises profit and loss accounts data. This report is compiled and transmitted by National Bank of Poland to CSO in quarterly periods since the 1st quarter of 2006.

Quarterly and annual reports of commercial banks

Quarterly and annual reports of commercial banks contain accounting data from banks other than the National Bank of Poland provided on quarterly as well as annual basis. In quarterly periods available data concerns profit and loss accounts (revenues, costs, financial results), while in annual periods – profit and loss accounts as well as balance sheets.

Insurance and Pension Funds Quarterly Bulletin and Yearbook

Insurance and Pension Funds Yearbook contains accounting data from insurance companies and pension societies provided on annual basis, while Insurance and Pension Funds Quarterly Bulletin – on quarterly basis. Information is based on surveys conducted by the Insurance and Pension Funds Supervisory Commission. The coverage of available data used in compilation of quarterly accounts is the following:

- for insurance companies – profit and loss accounts, selected data of technical accounts,
- for pension societies – balance sheets, profit and loss accounts statements.

Report on financial results of brokerages

Since 2004, the institution responsible for reporting of brokerages became the Polish Securities and Exchange Commission. The information is available in semi-annual periods and contains profit and loss accounts data. Nevertheless, due to their timeliness (data for the 1st half year is available in October, while for 2nd – in June of the next year), this data cannot be used in the process of compilation of quarterly accounts within the year.

Report on financial results of investment fund corporation

Report on financial results of investment fund corporation contains accounting data (profit and loss accounts, balance sheets) on investment funds and investment fund corporations obtained on semi-annual basis. Information is collected directly by the Central Statistical Office of Poland (statistical survey F-01/TFI Report on financial results of investment fund

corporation). Nevertheless, due to their timeliness (data for the 1st half year is available in October, while for 2nd – in June of the next year), this data cannot be used in the process of compilation of quarterly accounts within the year.

Report on financial results of co-operative saving and credit unions

Since 2006 data is collected and transmitted to CSO by National Association of Co-operative Saving and Credit Unions in semi-annual periods. The available information concerns profit and loss accounts and balance sheets data. Data for the 1st half-year is available in September, while annual data – in October of the next year.

Report on income, costs and financial results of companies

For other units belonging to the financial corporations sector (but not mentioned above) information needed for compilation of quarterly non-financial accounts is obtained from the statistical survey coordinated by CSO, which is called F-01/I-01 Report on incomes, costs, financial results and investment outlays. This information concerns 2 main types of industries within the A60 headings in NACE classification: 65 – Financial intermediation, except insurance and pension funding and 67 – Activities auxiliary to financial intermediation.

Due to the specificity of activity of units classified in the financial corporations sector, categories of non-financial accounts are calculated separately for each type of institutions and then aggregated for the whole sector. Methodology of calculation is identical to the methodology used in the process of compilation of annual national accounts. As a result, methodological consistency between these two statistics can be easily achieved.

Methodology of calculation of output and intermediate consumption for each type of units belonging to the financial corporations sector is described in detail below.

National Bank of Poland

According to the Council Regulation 448/98 (concerning calculation and allocation of FISIM), the output of National Bank of Poland is measured as a sum of cost: intermediate consumption, compensation of employees, other taxes less other subsidies on production, consumption of fixed capital. All data needed for this calculation is obtained directly from the profit and loss accounts. No estimation methods are needed.

Commercial banks

Data needed for calculation of output and intermediate consumption is obtained directly from the profit and loss accounts of commercial banks. In general, converting keys have been

elaborated in order to link items from the financial reports with items in national accounts. The keys are revised when the reports are modified.

Output of commercial banks is measured as a sum of FISIM calculated according to the method described in Regulations 448/98 and 1889/2002, commission revenues from the operating activity of banks and other operating revenues.

Intermediate consumption comprises aggregated value of goods and services consumed in the process of production (consumables, extraneous services, expenses of travels on business, other operating costs). Obtained information from profit and loss accounts of commercial banks allows to calculate each element of intermediate consumption.

Insurance companies

Data needed for calculation of output and intermediate consumption is obtained directly from the profit and loss accounts and technical accounts.

In general, insurance output is measured according to the algorithm described in ESA 95 para 3.63, i.e. difference between premiums earned and claims due, adding premium supplements and deducting change in technical provisions for outstanding risks and with-profits insurance.

Premiums earned are equal to premiums written less change in the provisions for unearned premiums, while claims due are calculated as claims written plus change in provisions for claim outstanding. The available information allows to calculate output separately for life and non-life insurance.

Intermediate consumption is estimated on the basis of the accounting data obtained from the Insurance and Pension Funds Supervisory Commission. The following items are taken into account in the process of calculation of intermediate consumption: administrative expenses (such as consumption of materials and energy, extraneous services, other operating costs), acquisition costs, other technical charges, other operating costs.

Brokerages

Due to the semi-annual periodicity of available information as well as their timeliness, in order to obtain necessary quarterly data for brokerages, estimation methods had to be elaborated. Estimated values are revised on the basis of actual semi-annual information when annual non-financial accounts are completed.

Output of brokerages is measured as the balance of commissions from operations involving securities, conducted for company's own use and the sum of commissions from operations involving securities conducted for clients as well as the sum of revenues from: managing packages of securities, offering securities in public turnover, underwriting issues, securities consulting, managing securities, accounts and monetary accounts of clients as well as revenues from financial instruments held for trading and available for sale and finally revenues from other operating activity.

Intermediate consumption of brokerages comprises aggregated value of goods and services consumed in the process of production (consumables, extraneous services, expenses of travels on business, other operating costs) as well as costs of financial instruments held for trading and available for sale.

Investment funds and investment fund corporations

Due to the semi-annual periodicity of available information as well as their timeliness, in order to obtain necessary quarterly data for investment funds and investment fund corporations, estimation methods had to be elaborated. Estimated values are revised on the basis of actual semi-annual information when annual non-financial accounts are completed.

Output of investment funds is calculated as the income earned from the investments, while the output of investment fund corporations – as revenues from activities connected with management of the investment funds.

Report on financial results of investment fund corporation provides detailed information on each category included in intermediate consumption (e.g. consumption of materials and energy, extraneous services, other operating costs).

Co-operative saving and credit unions

Until the end of 2005, only annual data was available. Therefore estimation methods had to be elaborated in order to obtain quarterly values.

Due to the fact that from 2006 semi-annual data is available, it was possible to reduce the estimations. Estimations still need to be done for the 1st and 3rd quarter, while the values for the 2nd and 4th quarter are calculated on the basis of semi-annual reports.

As the coverage of available information is identical for semi-annual and annual periods, output and intermediate consumption are calculated using the same methodology. Output of

co-operative saving and credit unions is measured as a sum of commission revenues from the operating activity of banks and other operating revenues. Intermediate consumption is obtained by the aggregation of its elements which are distinguished in profit and loss accounts of co-operative saving and credit unions.

Pension societies

Data needed for calculation of output and intermediate consumption is obtained directly from the profit and loss accounts of pension societies. No estimation methods are needed.

Output of pension societies is measured as the amount of revenues from activities connected with management of pension funds.

Intermediate consumption is calculated on the basis of data on costs included in profit and loss accounts.

Large companies classified in division 65 and 67 of NACE, not mentioned above

Data needed is available on quarterly basis and no estimation is needed. Converting keys have been elaborated in order to link items from the financial reports with items in national accounts.

Output of other financial intermediaries classified in division 65 of NACE, not mentioned above (e.g. leasing corporations, credit granting corporations, factoring corporations) is calculated as revenues from services connected with e.g. leasing of fixed assets or credit granting (fees and commissions).

Output of other financial auxiliaries classified in division 67 of NACE, not mentioned above (e.g. currency exchange offices, financial advisors) is measured as revenues from services connected with e.g. financial and securities consulting, advice on investments and taxation, administration of financial market. The revenues of these units are mainly valued on the basis of fees or commissions.

Intermediate consumption is calculated using adequate items from profit and loss accounts.

Medium companies classified in division 65 and 67 of NACE, not mentioned above

Due to the semi-annual periodicity of available information as well as their timeliness, in order to obtain necessary quarterly data for the 1st and 3rd quarter, estimation methods had to be elaborated. For the 2nd and 4th quarter, the methodology used is identical to the methodology of compilation for large companies described above.

Small companies classified in division 65 and 67 of NACE, not mentioned above

Since the reports of financial institutions employing up to 9 persons are obtained only on annual basis and their coverage is unsatisfactory for compilation of quarterly non-financial accounts estimation methods had to be elaborated.

Due to unsatisfactory periodicity and timeliness of available data, but not due to insufficient coverage of available data (the only exception concerns small companies classified in division 65 and 67 of NACE for which periodicity as well as the coverage of available information are unsatisfactory) estimation methods are needed. The estimations are used for the following institutions classified in financial corporations sector: brokerages, investment funds and investment fund corporations, co-operative saving and credit unions, medium companies classified in division 65 and 67 of NACE, small companies classified in division 65 and 67 of NACE.

Brokerages, investment funds and investment fund corporations

The timeliness of available information for these units (October – for data concerning 1st half-year and June – for 2nd half-year data) causes that this data cannot be used for compilation of quarterly accounts for current reporting quarter. This data is used after the compilation of annual national accounts in order to revise quarterly accounts, so that these statistics would be consistent.

In order to have values for current reporting quarter estimations have to be done. Estimations are based on long time series of historical data as well as on analysis of the actual trends on the financial markets. In the revised version of quarterly accounts (after the completion of annual national accounts), due to the availability of semi-annual data, the following simplification is made: values for the 1st and 2nd quarter are equal (estimated by dividing semi-annual values by 2), values for the 3rd and 4th quarter are also equal. Estimations carried out do not have significant impact on the quality of quarterly accounts as their shares in total values for the whole sector are not important. For example, the shares of the gross value added of these institutions in total value for sector for the annual data for 2005 were equal to: 2,4%, 1,8% and 0,9% respectively.

Co-operative saving and credit unions

For the period 1999-2005 (when only annual data were available), in order to estimate quarterly values, it was decided to make simplification and divide annual figures by 4. This simple estimation method is consistent with the specificity of activity of co-operative saving and credit unions as well as other factors, like trends on the financial market.

Due to the fact that from 2006 semi-annual data is available, estimation method has been slightly changed. For the 1st and 2nd quarters the values of output and intermediate consumption are identical and are calculated as a result of division by 2 semi-annual amounts. Values for 3rd and 4th quarter are equal to each other and are obtained by division by 2 figures for the second half of the year.

Medium companies classified in division 65 and 67 of NACE

Due to the fact that only semi-annual data is available, following estimation methods are used: for the 1st and 2nd quarters the values of output and intermediate consumption are identical and are calculated as a result of division by 2 semi-annual amounts. Values for 3rd and 4th quarter are equal to each other and are obtained by division by 2 figures for the second half of the year.

Small companies classified in division 65 and 67 of NACE

In case of small companies classified in division 65 and 67 of NACE estimations are needed due to two factors: the first – periodicity of available information and the second – the coverage of this information.

As the information on activity of these units is very limited even in annual periods, it was difficult to elaborate reliable estimation method for obtaining quarterly data. Having analysed the possible solutions it was decided that the best method of estimation will be to divide annual values by 4.

Since the reports of financial institutions employing up to 9 persons are not detailed enough (only information on revenues and costs from total activity on annual basis is available), some indicators are used to estimate output and intermediate consumption. These indicators were elaborated on the basis of information obtained in 1999, when CSO conducted detailed surveys of these units including information on categories used in calculation of non-

financial accounts. In order to estimate the value of output and intermediate in each year, the change in number of employees and the growth rate of the revenues and costs from total activity were taken into account respectively.

Open pension funds

Data needed for calculation of output and intermediate consumption is obtained directly from the profit and loss statements. Because in Polish system it does not take place payments of pension from open funds is not possible to apply recommendations ESA'95 with relation to the calculation of the gross output and intermediate consumption. Output is measured as a income from investment portfolio and intermediate consumption comprises aggregated value of costs of funds management, cost of payments to surplus account, cost of depositary's remuneration and distribution payment.

Private household (NACE P)

For section P – activities of households- the basis of gross value added estimates is quarterly data about average wages in national economy and number of employees in section P based on REGON.

The non-market sections (NACE L-N)

Estimates for the sections within the sector of non-market services are produced differently than those for the market services. The basis for calculation are information on output and intermediate consumption of general government sector.

Non-market sections include mostly budgetary units. Their output is both market and non-market. Non-market output constitutes costs of current activity including consumption of fixed assets. Market output constitutes value of goods and services for sale or for own final use, i.e. products designated for increasing value of own fixed assets.

Data sources for non-market sections:

- Budgetary reports of central and local budgetary units,
- Budgetary reports of central and local extra budgetary units and special purpose funds,
- Report on income, costs and financial results of public universities,

- Report on financial results of central and local institutions of culture,
- Report on financial results of central and local health care institutions,
- Reports of the Polish Academy of Science and its dependant units,
- Reports of the National Road Fund,
- Budgetary reports of Agricultural Advisory Units,
- Budgetary reports and profit and loss accounts of agencies,
- Reports of the Social Insurance Institution,
- Reports of the Board of Social Insurance for Farmers,
- Budgetary reports of social insurance funds,
- Report of National Health Fund,
- Reports of Open Pension Funds.

Budgetary reports of central and local budgetary units

Reports of central and local units are based on the budgetary classification. Reports contain accounting data - public expenditure, revenue, claims and liabilities. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period).

Budgetary reports of central and local extra budgetary units and special purpose funds

Reports of central and local extra budgetary units and special purpose funds are based on the budgetary classification. The information is available on semi-annual as well as annual basis 70 days after the reference period.

Report on income, costs and financial results of public universities

Report on income, costs and financial results of public universities contains accounting data - profit and loss accounts and some elements of balance sheets. The information is available on annual basis. Statements are collected directly by the Central Statistical Office of Poland (statistical survey F-01/s). Nevertheless, due to their timeliness (data is available in June of the next year), this data cannot be used in the process of compilation of quarterly data within the year.

Report on financial results of central and local institutions of culture

Report on financial results of central and local institutions of culture contains accounting data - profit and loss accounts and balance sheets. The information is available on annual basis. Statements are collected directly by the Central Statistical Office of Poland (statistical survey F-02/dk). Nevertheless, due to their timeliness (data is available in June of the next year), this data cannot be used in the process of compilation of quarterly data within the year.

Report on financial results of central and local health care institutions

Since 2004, the institution responsible for reporting of health care institutions became the Ministry of Health. The information is available in semi-annual periods and contains balance sheets and profit and loss accounts data (statistical survey MZ-03). Nevertheless, due to their timeliness (data for the 1st half year is available in August, while for 2nd – in April of the next year), this data cannot be used in the process of compilation of quarterly data within the year.

Reports of the Polish Academy of Science and its dependant units

Reports of the Polish Academy of Science and its dependant units contain accounting data - profit and loss accounts and balance sheets. The information is available on annual basis. Financial statements are collected directly by the Polish Academy of Science. Nevertheless, due to their timeliness (data is available in June of the next year), this data cannot be used in the process of compilation of quarterly data within the year.

Financial statements of the National Road Fund

Financial statements of the National Road Fund contain accounting data - profit and loss accounts, balance sheets and report on expenditure and revenue. The information is obtained directly from Bank Gospodarswa Krajowego 70 days after the reference period. Profit and loss accounts and balance sheets are available on quarterly basis, while report on expenditure and revenue – on monthly basis.

Budgetary reports of Agricultural Advisory Units

Budgetary reports of Agricultural Advisory Units contain accounting data - expenditure and revenue on accrual basis. Statements are collected and aggregated by the Ministry of Finance and then re-sent to the Central Statistical Office. The information is available quarterly 70 days after the reference period.

Budgetary reports and profit and loss accounts of agencies

For agencies two main data sources are used in compilation of quarterly data. First data sources is budgetary reports which contain accounting data - public expenditure and revenue on accrual basis. Statements are collected by the Ministry of Finance Second information concerning agencies is profit and loss accounts obtained directly from these units. Budgetary reports and profit and loss accounts of agencies are available on annual basis in June of the next year so this data cannot be used in the process of compilation of quarterly data within the year.

Report of the Social Insurance Institution

Reports of the Social Insurance Institution contain accounting data - profit and loss accounts and balance sheets. The information is available on quarterly basis 60 days after the reference period. Financial statements are obtained directly from the Social Insurance Institution.

Board of Social Insurance for Farmers Quarterly Bulletin

Board of Social Insurance for Farmers Quarterly Bulletin contains accounting data - revenue and expenditure on accrual basis. The information is available on quarterly 80 days after the reference period. Bulletin is obtained directly from the Board of Social Insurance for Farmers.

Budgetary reports of social insurance funds

Reports of social insurance funds are based on the budgetary classification. Reports contain accounting data - public expenditure and revenue on accrual basis. Statements are collected and aggregated by the Ministry of Finance and then re-sent to the Central Statistical Office (in the form of detailed electronic database). The information is available on semi-annual as well as annual basis 70 days after the reference period.

Report of National Health Fund

Report of the National Health Fund contains accounting data – revenue and expenditure on accrual basis. The information is available quarterly 60 days after the reference period. Financial statements are obtained directly from the National Health Fund.

Report of Open Pension Funds

Reports of Open Pension Funds contain accounting data - profit and loss accounts. The information is available on quarterly basis 50 days after the reference period. Financial statements are obtained directly from the Commission for Insurance and Pension Funds Supervision.

Output - P.1

Methodology of calculation general government output is in accordance with Commission Regulation (EC) No 1500/2000 of 10 July 2000 implementing Council Regulation (EC) No 2223/96 with respect to general government expenditure and revenue.

Output includes following categories:

- market output (P.11),
- output produced for own final use (P.12),
- other non-market output (P.13).

The calculation of output of units allocated to the general government sector is based on the fact that units of the type of non-market producer are involved. They report revenues from sales of services such as revenues from rented buildings or sold publications or revenues in the form of administrative fees.

Market output - P.11

Market output includes mainly revenues from sales of products, property renting revenues and revenue from secondary activities of government units.

Data for central and local budgetary units is obtained from the Ministry of Finance. Data is available on a cash basis and this data have to adjust to an accrual basis. In order to make this adjustment the data on claims are used. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period). In the case of local budgetary units when the first estimation of the figure for a given quarter is calculated, only data for the first two months of the quarter is available and it is necessary to make a forecast for the third month of the quarter. Figures are estimated based on analysis of long time series of historical data and take into account the trends on the market. When direct accounting information becomes available, it is included in the accounts.

For calculation of market output for other general government units the Central Statistical Office use accrual data on public revenue on annual or semi-annual basis. Quarterly figures are estimated based on annual or semi-annual reports, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year. It must be underlined that importance of estimates in the general government sector is insignificant.

Output produced for own final use - P.12

Output produced for own final use includes mainly revenue from investments on own account.

Data for central and local budgetary units is obtained from the Ministry of Finance. Data is available on a cash basis and this data have to adjust to an accrual basis. In order to make this adjustment the data on claims are used. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period). In the case of local budgetary units when the first estimation of the figure for a given quarter is calculated, only data for the first two months of the quarter is available and it is necessary to make a forecast for the third month of the quarter. Figures are estimated based on analysis of long time series of historical data and take into account the trends on the market. When direct accounting information becomes available, it is included in the accounts.

For calculation of output produced for own final use for other general government units the Central Statistical Office use accrual data on public revenue on annual or semi-annual basis. Quarterly figures are estimated basing on annual or semi-annual reports, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year. It must be underlined that importance of estimates in the general government sector is insignificant.

Other non-market output - P.13

Other non-market output (P.13) is subdivided into two items:

- payments for the other non-market output (P.131), which consist of various fees and charges,
- other non-market output (P.132), covering output that is provided free.

Payments for the other non-market output - P.131

Payments for the other non-market output include mainly tuition revenues, administrative and court fees (payments for provided government services), waste deposition charges or fees for use of public areas or output of the dwellings services etc.

Data for central and local budgetary units is obtained from the Ministry of Finance. Data is available on a cash basis and this data have to adjust to an accrual basis. In order to make this adjustment the data on claims are used. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period). In the case of local budgetary units when the first estimation of the figure for a given quarter is calculated, only data for the first two months of the quarter is available and it is necessary to make a forecast for the third month of the quarter. Figures are estimated based on analysis of long time series of historical data and take into account the trends on the market. When direct accounting information becomes available, it is included in the accounts.

For calculation of payments for the other non-market output for other general government units the Central Statistical Office use accrual data on public revenue on annual or semi-annual basis. Quarterly figures are estimated basing on annual or semi-annual reports, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year. It must be underlined that importance of estimates in the general government sector is insignificant.

Other non-market output - P.132

The total output of an other non-market producer is to be valued at the total costs of production and is equal the sum of:

- intermediate consumption (P.2),
- compensation of employees (D.1),
- consumption of fixed capital (K.1),
- other taxes on production (D.29) less other subsidies on production (D.39).

Intermediate consumption - P.2

The methods used to compute figures for intermediate consumption are the same to those used for annual accounts. However, when data is too aggregate (as is the case for the other general government units, where data is obtained from profit and loss accounts), some simplifications are needed (for instance, for distinguishing intermediate compensation from compensation of employees), in order to obtain the nature of the transaction according to ESA95.

Data for central and local budgetary units is obtained from the Ministry of Finance. Data is available on a cash basis and this data have to adjust to an accrual basis. In order to make this adjustment the data on liabilities are used. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period). In the case of local budgetary units when the first estimation of the figure for a given quarter is calculated, only data for the first two months of the quarter is available and it is necessary to make a forecast for the third month of the quarter. Figures are estimated basing on analysis of long time series of historical data and take into account the trends on the market. When direct accounting information becomes available, it is included in the accounts.

For calculation of intermediate consumption for other general government units the Central Statistical Office uses accrual data on public expenditure on annual or semi-annual basis. Quarterly figures are estimated basing on annual or semi-annual reports, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year.

Compensation of employees - D.1

Compensation of employees is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during the accounting period. Compensation of employees is broken down into:

- wages and salaries (D.11),
- employers' social contributions (D.12).

For general government direct information is available on paid wages and salaries and employers' social contributions. Data for central and local budgetary units is obtained from the Ministry of Finance. A monthly report on the expenditure of central budgetary unit and quarterly report of local budgetary unit contain detailed information about expenditure. The data sets are structured and basing on budgetary accounting principles (on a cash basis). Data is analyzed, transformed and allocated to the correct ESA 95 heading. Accrual adjustments are made using data on liabilities. The information is available 40 days after the reference period for central entities and 70 days after the reference period for local units. In the case of local budgetary units when the first estimation of the figure for a given quarter is calculated, only data for the first two months of the quarter is available and it is necessary to make a forecast for the third month of the quarter. Figures are estimated basing on analysis of long

time series of historical data and take into account the trends on the market. When direct accounting information becomes available, it is included in the accounts.

For calculation of compensation of employees for other general government units the Central Statistical Office uses accrual data on public expenditure on annual or semi-annual basis. Quarterly figures are estimated basing on annual or semi-annual reports, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year. It must be underlined that importance of estimates in the general government sector is insignificant.

Consumption of fixed capital - K.1

Data on consumption of fixed capital are compiled by separate section in National Accounts Division on the basis of reporting concerning consumption of fixed capital.

Other taxes on production - D.29 PAY

Other taxes on production consist of all taxes that enterprises incur as a result of engaging in production, independently of the quantity or value of the goods and services produced or sold.

In Poland other taxes on production include following categories:

- real estate tax,
- other taxes to the state budget,
- other taxes to the budgets of local government units.

Data for central and local budgetary units is obtained from the Ministry of Finance. Data is available on a cash basis and this data have to adjust to an accrual basis. In order to make this adjustment the data on liabilities are used. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period). In the case of local budgetary units when the first estimation of the figure for a given quarter is calculated, only data for the first two months of the quarter is available and it is necessary to make a forecast for the third month of the quarter. Figures are estimated basing on analysis of long time series of historical data and take into account the trends on the market. When direct accounting information becomes available, it is included in the accounts.

For calculation of intermediate consumption for other general government units the Central Statistical Office uses accrual data on public expenditure on annual or semi-annual

basis. Quarterly figures are estimated basing on annual or semi-annual reports, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year.

4.2 FISIM

A Council Regulation No 448/98 defined basic rules of calculation and allocation of FISIM in national accounts and introduced four-year trial calculations. After this period, Member States agreed on methods of calculation, which were legislated for in Commission Regulation 1889/2002. The Regulation specified the following methods to be applied:

1. Calculation and allocation of FISIM using the reference rate:
 - internal reference rate – for calculation and allocation of “domestic” FISIM; defined as the ratio of interest receivable on loans between other monetary financial institutions (S.122) and other financial intermediaries, except insurance corporations and pension funds (S.123) to stock of loans between S.122 and S.123,
 - external reference rate – for calculation of imports and exports of FISIM; defined as the average interbank rate weighted by the ratios of loans and deposits between S.122 and S.123 on the one hand and non-resident financial intermediaries on the other hand;
2. Calculation of FISIM at constant prices by applying the FISIM margins of the base period to the current stocks of loans and deposits;
3. Allocation of FISIM among industries – based on stocks of loans and deposits for each industry, or on the output for each industry;

According to the decision of Council FISIM is calculated only on loans and deposits granted by financial intermediaries S.122 and S.123. The central bank must not be included in the calculation of FISIM – its output is measured as the sum of cost and entirely allocated to the intermediate consumption of S.122 and S.123.

Calculated values of FISIM are recorded in national accounts in the following way:

- for producers of FISIM (S.122 and S.123) – as output (P.1),
- for consumers of FISIM (non-financial corporations S.11, financial auxiliaries S.124, insurance corporations S.125, general government S.13, households S.14, non-profit institutions S.15) – as intermediate consumption (P.2) or final consumption (P.3),

- for rest of world (S.2) – as exports (P.6) or imports (P.7).

In the case of households: FISIM is recorded as intermediate consumption (P.2) for households as owners of dwellings and owners of unincorporated enterprises. For households as consumers, FISIM is treated as final consumption (P.3).

Due to the fact that output of S.13 and S.15 is calculated as a sum of cost, FISIM for these sectors (recorded in P.2) is recorded at the same time as an element of output (P.1). As S.13 and S.15 consume their own output, the same value will be shown also in their final consumption (P.3).

Moreover, as a result of allocation of FISIM according to the Commission Regulation no 1889/2002, the following adjustments of interests (D.41) are needed:

- a) for “domestic” FISIM
 - for consumers of FISIM (S.11, S.124, S.125, S.13, S.14, S.15)
 - interests paid are reduced by the amount of FISIM on loans,
 - interests received are increased by the amount of FISIM on deposits,
 - for producers of FISIM (S.122, S.123)
 - interests received are reduced by the amount of FISIM on loans,
 - interests paid are increased by the amount of FISIM on deposits.
- b) for exports of FISIM
 - for consumers of FISIM (S.2)
 - interests paid are reduced by the amount of FISIM on loans,
 - interests received are increased by the amount of FISIM on deposits,
 - for producers of FISIM (S.122, S.123)
 - interests received are reduced by the amount of FISIM on loans,
 - interests paid are increased by the amount of FISIM on deposits.
- c) for imports of FISIM
 - for consumers of FISIM (S.11, S.124, S.125, S.13, S.14, S.15):
 - interests paid are reduced by the amount of FISIM on loans,
 - interests received are increased by FISIM on deposits,
 - for producers of FISIM (S.2)
 - interests received are reduced by the amount of FISIM on loans,
 - interests paid are increased by the amount of FISIM on deposits.

Methodology of calculation and allocation of FISIM in Poland is fully consistent with requirements of Regulations no 448/1998 and 1889/2002.

Allocation of FISIM among industries is based on the output, because data sources are not so detailed to have information on loans and deposits for each industry.

Calculation method of FISIM at constant prices

According to the “Manual on prices and volume measures in national accounts” there is no directly observable price or quantity representative of FISIM output. Therefore, it is impossible to identify a method for calculation of FISIM at constant prices. Two approaches to deflate FISIM should be considered as B methods. These methods are:

1. output indicator method,
2. application of base period margins on loans and deposits to the stocks re-valued to base period prices (method described in Regulation no 448/98).

Poland uses the second method.

4.3 Taxes less subsidies on products

4.3.1 Taxes on products - D.21

In Poland the only beneficent of indirect taxes is central government sub-sector. Taxes on products include following categories:

- value added taxes (VAT),
- customs duties,
- excise,
- gambling and lotteries taxes,
- receipts from sugar levies.

Methodology of calculation indirect taxes is in accordance with Regulation (EC) No 2516/2000 of the European Parliament and of the Council of 7 November 2000 modifying the common principles of the European system of national and regional accounts in the Community (ESA95) as concerns taxes and amending Council Regulation (EC) No 2223/96.

The information is available monthly (40 days after the reference period) from the Ministry of Finance. Taxes on products are recorded on a cash basis in the budgets and the data have to be retreated to become consistent with ESA95 rules.

For calculation of indirect taxes two methods were applied. Data used for recording gambling and lotteries taxes and receipts from sugar levies is available on a cash basis and

this data have to adjust to an accrual basis. In order to make this adjustment the data on claims are used.

In the case of VAT, customs duties and excise the Central Statistical Office use cash receipts and one month time adjustment is applied.

VAT taxes are based on self-assessment, which means that the taxpayer sends to the government a return showing the amount of tax to be paid and then pays that sum in due course. For VAT, a correction is made for the time difference between the payment date and the period to which it refers. For any given quarter, revenues related to economic transactions which took place during the previous quarter have to be deducted from the cash-based VAT amount, and similarly revenues in respect of economic transactions taking place during the quarter in question but collected during the following quarter have to be added. This operation gives the amount of VAT on the basis of “time adjusted cash registration”.

It must be underlined that when the first estimation of the indirect taxes figure for a given quarter is calculated, only data for the first two months is available and it is necessary to make a forecast for the third month of the time adjusted quarter (for example: when calculating data for second quarter, only data for May and June is available and data for July must be estimated). To do so the Central Statistical Office use monthly report on budget realization prepared and published (15 days after the reference month) by the Ministry of Finance. Report contains estimated data on customs duties, excise and aggregated data on other indirect taxes.

4.3.2 Subsidies on products - D.31

Subsidies are current unrequited payments which general government or the Institutions of the European Union make to resident producers, with the objective of influencing their levels of production, their prices or the remuneration of the factors of production. Subsidies on products are subsidies payable per unit of a good or service produced or imported. In Poland almost of all subsidies on products are subsidies for agriculture – support program for rural areas (Common Agricultural Policy) and object-specific grant from the budget to units not classified in the public finance sector.

The main data sources for subsidies on products are:

- data on budget reports from Ministry of Finance;
- data on subsidies for agriculture from Agency for Restructuring and Modernization of Agriculture (ARMR),

Production on following agricultural products were subsidized by central units: sugar beets, flaxes, grains and so on. Subsidies for agriculture cover:

- complementary area payment;
- payments for producers of tomatoes;
- separate sugar payment;
- payments for starch potatoes and tobacco producers;
- payments for energetic plants.

Subsidies are estimated on accrual basis. First estimation of subsidies of agriculture for I and II quarter is not accurate because payments for each year start in fourth quarter and that is why there is lack of information for these quarters. After analyses of area payments for the last 3 years, since 2004-after joining EU, stable tendency in this area has been assumed. The highest payments are made in the first and fourth quarter. In first estimation of I and II quarter subsidies for agriculture are predicted to be equal to the sum of payments made in these quarters, no matter which campaign it is (cash-basis). For the third quarter subsidies are equal to 0. For the fourth quarter data from ARMR about payments in IV quarter for campaign of year analyzed are already available, so they are taken directly (accrual basis). When annual data are revised, quarterly data about payments according to campaigns are available in almost 100 %. Then each quarter is re-estimated once again.

In quarterly national accounts following algorithm of estimation of agriculture subsidies according accrual basis is used: to achieve total value of subsidies for i-quarter in t-year subsidies from the campaign of t-year in i-quarter of t-year, t+1-year, t+2-year... are added. Payments for campaign of t-year appear also in t+3-year, but 99% of payments are realized in t and t+1-year. Moreover, for IV quarter of t-year it is assumed that 100% of payments is done in IV quarter t-year, for I and II quarter of t-year in t+1-year.

Data on object-specific grant from the budget to units not classified in the public finance sector is obtained from the Ministry of Finance. The information is available monthly for central entities (40 days after the reference period) and quarterly for local units (70 days after the reference period). Data is available on a cash basis and this data have to adjust to an accrual basis. In order to make this adjustment the data on claims and liabilities are used.

CHAPTER 5. GDP AND COMPONENTS: THE EXPENDITURE APPROACH

From the expenditure side of GDP following categories are calculated: final consumption expenditure (individual consumption expenditure, general government and NPISHs consumption expenditure), gross capital formation (gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables) and foreign trade turnover.

5.1 Individual consumption expenditure in the households sector (P31, S14)

Individual consumption expenditure in the households sector (P31, S14) includes:

- expenditures carried by population for purchases of market products and services including expenditures in catering establishments valuated at prices paid by consumers;
- value of own consumption of agricultural products originating from own production valuated at procurement prices of raw (not processed) products;
- purchase of non-market services realized on partial payment rules, this is: value of services in education, health care and social welfare, culture and art, physical education, sport, tourism and recreation, dwelling services;
- value of imputed rents for dwellings occupied by owners and occupiers estimated by user cost method;
- actual rents for dwellings in rental buildings;
- services of travels abroad according to value included in balance of payments;
- benefits from investing of insurance premiums of open pension funds.

Individual consumption expenditure in the household sector do not include among others purchases of land, houses and flats, costs of business trips, contributions to charity, court fees, customs duties, passport fees, contributions to political and social organizations, inheritance and donation taxes etc.

Individual consumption expenditure is presented according to Classification of Individual Consumption by Purpose (COICOP).

In the individual expenditure non-observed activities and “VAT fraud” (deductible but not paid) are included.

For compiling individual consumption expenditure in the household sector the following main sources are used:

- retail trade statistics,
- household budget survey (HBS),
- balance of agricultural products,
- BoP (among others: data from tourists institute)
- administrative sources.

Information on Retail Trade (RT)

Information on retail trade is derived from different statistical reports. The main source covers sales and stocks in retail sales outlets and catering establishments. Additionally, there is a questionnaire for the sample survey on the activity of retail shops and petrol sales specify 52 groups of commodities. The report also covers the value of realised retail sales of wholesalers (16 groups of commodities).

The data received from retail trade statistics, for national accounts purposes, are grouped according to the COICOP classification. The most detail structure of retail sales is used from HBS.

Sales for HFC outside the retail trade system covers:

- sales in market places directly by producers - data from the agricultural accounts
- data on unregistered economy – data from special consumers’ survey used for estimating households expenditures for purchases goods and services from hidden activity. The survey concerned the dimensions of expenditures for services such as construction and renovation of houses, garages and other farm buildings, the renovation of apartments and emergency repairs, automobile servicing and repairs, tourist services, cleaning of dwellings, baby-sitting, renting of houses and apartments to tourists, etc.

The retail trade statistics covers all registered units engaged in retail sales:

- shops, big stores,
- wholesalers conducting the retail trade, too,
- manufactures conducting the retail sales as secondary activity.

The Household Budget Survey (HBS) is a monthly sample survey. The results are representative for all private households of Polish citizens. Household budget survey is voluntary. This is carried out using a full rotation system with one month period of families replacement.

Each month about 2700 households are surveyed by interviewers employed by the regional statistical offices. The survey covers all geographic areas and socio-economic groups. Data on purchases of consumption goods, production for own-consumption, purchases of valuables as well as own account fixed capital formation is collected too. Data is gathered from HBS, the raw grossed up for all Polish households data of expenditure per one person, split by COICOP is received.

For HFC purposes this data is grossed up for total population lives in private households and after this the values are connected by the living in institutions.

The HBS asks only households where all members are Polish citizens. The total number of households that is used for grossing up the figures is taken from the Labour Force Survey, and includes all resident private households.

Balance of agricultural products – data comes from reports on production in agricultural enterprises providing data in physical quantities, and surveys of quantities sold and prices obtained at the farmers' markets. The balance are prepared in quantities and combined with agricultural prices estimates to give value of figures.

Balance of Payments – data from National Bank of Poland derived from Tourists Institute on tourism expenditure for goods and services. These data cover a significant part of non-registered imports and exports. From the title of non-registered tourism expenditure the HFC is adjusted.

Administrative sources – information on lottery services from Ministry of Finance valued on a net basis, data on insurance from Polish Financial Supervision Authority.

5.2 Consumption expenditure in the non-profit institutions sector serving households (P31, S15)

Consumption expenditure in the non-profit institutions sector serving households (P31, S15) is assumed to be on the level of gross output of this sector less payments to population.

According to ESA'95, the value of market services generated in this sector is entirely transferred to households free of charge as social benefits in kind. So, consumption expenditure includes value of non-market services rendered from social benefits fund in kind in this sector.

5.3 Final consumption expenditure of general government (P3, S13)

Methodology of calculation general government final consumption expenditure is in accordance with Commission Regulation (EC) No 1500/2000 of 10 July 2000 implementing Council Regulation (EC) No 2223/96 with respect to general government expenditure and revenue.

Final consumption expenditure (P.3) by general government is equal to the sum of their output (P.1), plus the expenditure on products supplied to households via market producers, part of social transfers in kind (D.6311 + D.63121 + D.63131), minus the payments by other units, market output (P.11) and payments for the other non-market output (P.131), minus own-account capital formation (P.12).

output - P.1 (see the description of non-market services).

Social transfers in kind related to expenditure on products supplied to households via market producers - D.6311 + D.63121 + D.63131

D.6311 + D.63121 + D.63131 are purchases by general government of goods and services produced by market producers that are supplied to households, without any transformation, as social transfers in kind. The major component of this category is related to medical treatments, surgery, hospital accommodation, medical appliances, medicines supplements and student assistance in kind.

The quarterly data on social transfers in kind related to expenditure of central and local government are available from the Ministry of Finance provided cash reports on the state budget execution. Using information on liabilities cash data is adjusted to an accrual basis.

Data on social transfers in kind related to expenditure of social security funds are available from annual and semi-annual accrual reports on budget execution of the National Health Fund and central and local health care institutions. Quarterly figures are estimated basing on annual or semi-annual data, partly available quarterly information obtained directly from these units and analysis of long time series of historical data and take into account the trends on the market during the given year. It must be underlined that importance of estimates in the general government sector is insignificant.

Market output - P.11 (see the description of non-market services).

Payments for the other non-market output - P131 (see the description of non-market).

Output produced for own final use - P.12 (see the description of non-market services).

5.4 Gross capital formation

Gross capital formation constitutes changes in national capital, which cover gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables.

5.4.1 Gross fixed capital formation (P.51)

Information on GFCF in Poland include outlays on new fixed assets as well as improvement of existing ones, i.e., enlargement, modernization and renovation. Exclude from GFCF are routine repairs and periodically maintenance work that does not change the functioning of assets.

GFCF is valued at price of producing or price of purchasing including additional costs connected directly with the purchase and the adaptation of the fixed assets to the use (for example installation costs) as well as other costs connected with the ownership transfer.

In case of outlays on fixed assets produced on own-account – assets are valued according to the manufacture costs, which include costs being in direct connection with the fixed assets (value of the materials used in the production process, processing costs connected directly with the production process) as well justified part of the costs connected indirectly with the production process of the asset.

Fixed assets acquired through the financial leasing are covered in gross fixed capital formation in their total value when the user takes them over in possession.

Quarterly estimates of the gross fixed capital formation (P.51) include:

- outlays on tangible fixed assets,
- outlays on intangible fixed assets,
- other outlays, of which:
 - outlays on major repairs in the general government sector,
 - changes of the livestock (basic herd) in agriculture,
 - estimation of the hidden economy in investment outlays,
- “VAT fraud” estimates.

Outlays on tangible fixed assets

Outlays on tangible fixed assets are worked out for any institutional sector in quarterly period, and so for:

1. **units from sector of non-financial corporation** – data sources of information on quarterly basis are:

- **reporting data** for:

- non-financial corporations where the number of employees exceeding **50 persons** from the **F-01/I-01 (part II) report** - about receipts, costs and financial result as well as outlays on fixed assets for I, II, III and IV quarter

- non-financial corporations where the number of employees is between **10 and 49 persons** from **F-01/I-01 (part II) report** - for 2 and 4 quarters.

- **estimated data** for:

- non-financial corporations with number of employees between **10 and 49 persons** for first and third quarter - based on data from **F-01/I-01 (part II) report** for half-yearly periods of previous year and half-year of the subject year, and

- legal persons with number of employees **up to 9 persons** – based on analysis of expenditures incurred by legal persons with number of employees between **10 and 15 persons** in individual kinds of activity as well as on aggregated results of annual representative survey (SP-3 - report on economic activity of enterprise) of legal person with number of employees up to 9 persons from last 2 years.

2. **units from sector of financial and insurance institutions** – data is elaborated based on **I-01 report about** outlays on fixed assets for I, II , III and IV quarter;

3. **units from general government sector** – quarterly data about expenditures on fixed assets (based on budgetary reporting on Rb formulas) are received from the Ministry of Finance;

4. **households sector** – estimations include the data for:

- natural person with number of employees up to 9 persons – based on analysis of expenditures incurred by natural persons with number of employees between **10**

and 15 persons in individual kinds of activity as well as on aggregated results of annual representative survey (SP-3 - report on economic activity of enterprise) of legal person with number of employees up to 9 persons from last 2 years;

- individual housing construction – based on reporting:

- B-05 – report on given permission on construction of building objects (quarterly) exhaustive in range of number of given permission on individual housing construction,

- B-07 – report on dwelling houses and apartments that were taken into utility (quarterly) – exhaustive in range of usable surface and cubature of individual dwellings that were taken into utility,

- individual agriculture for:

- outbuilding – based on information from B-08 report on non-residential buildings that were taken into utility,

- agricultural machines – based on information on their production, imports and exports,

- basic herd – based on formulas:

- R-KSRA – survey on the cattle's stock, sheep and the poultry

- R-KSRB - survey on stock of swine

- detailed melioration - based on annual data received from the Ministry of Agriculture

5. **sector of nonprofit institutions**– based on number of units at the end of every quarter in Base of Statistical Units.

The range of subjects of information in quarterly reports **F-01/I-01 (part II)** and **I-01** (as well as in annual reports for the purposes of quarterly estimates) is the base for elaboration of quarterly data on GFCF according to **Pi6 classification**.

This scope includes data regarding investment outlays on new capital asset items or the improvement (rebuilding, enlargement, reconstruction or modernization) of existing ones, as well as, the purchase of second-hand fixed assets with specification of outlays on:

- the improvement of land,

- buildings and places,

- of which residential buildings and dwellings

- civil engineering works,

- machinery and technical equipment,
of which computer equipment
- transport equipment,
- tools, instruments, movable and endowments,
- livestock.

Outlays on intangible fixed assets

Intangible fixed assets included in investment outlays elaborated for the national accounts' needs include outlays on:

- mineral exploration ;
- computer software (purchased and produced on own account);
- entertainment, literary and artistic originals ;
- other produced intangible fixed assets - know-how .

Data sources on outlays on intangible fixed assets are data:

- 1) obtained from reports F-01/I-01 and I-01 appropriate institutional sectors (analogously with outlays on tangible fixed assets),
- 2) estimated (on the basis of annual data) within the scope of:
 - computer software produced on own account,
 - entertainment, literary and artistic originals,
 - general government sector.

To obtain the total value of **gross fixed capital formation** according National Accounts methodology, they have to be completed with hidden economy estimates, outlays on major repairs in general government sector and VAT fraud (evading paying the tax).

I. Hidden economy estimates are carried out with the results of labour market survey (the data on wages and salaries, the number of employed persons, registered unemployed persons, the results of Labour Force Survey (LFS) conducted by Labour and Living Conditions Division of CSO, the module survey of non-registered employment) Business Tendency Survey in industry and trade and VAT payments. Due to the lack of information in quarterly periods the share

of hidden economy in total value of outlays on tangible fixed assets on annual basis is applied.

II. VAT deductible but evading paying “VAT fraud” in quarterly periods is estimated as a share of annual VAT fraud rate to the annual value of hidden economy. The data is calculated on the basis of previous year.

III. Outlays on major repairs in general government sector are estimated on the basis of data from budgetary reports (RB) using the special index elaborated by CSO, Ministry of Finance and National Bank of Poland as well as on the profit and loss accounts for institutions not covered by budgetary reports. All elements are registered at current prices and then divided into Pi6 classification. Hidden economy is included in construction of housing Pi64 – 50%, metals products and machinery Pi62 – 10 %, transport equipment Pi63 – 10 % and the rest in other constructions. The total value of major repairs is included in other buildings and structures (Pi65). Such a disaggregated data is then recalculated into constant prices of previous year using the appropriate index for individual category of Pi6: elaborated by Business and Price Division of CSO. For other categories of Pi6 i. e. agriculture products and others price index of consumer goods and services for total economy is applied to calculated the constant prices of previous year.

The categories: machinery and transport equipment are divided into subcategories: domestic and imported ones based on the share taken from annual accounts. For recalculating domestic goods into constant prices of previous year the appropriate index for machinery and transport is used. Meanwhile, imported goods are recalculated into constant prices using index for investment imports.

5.4.2 Changes in inventories (P.52)

Changes in inventories in Polish quarterly national accounts are estimated directly and are not determined as a balancing item in the account. They are registered on both production and expenditure sides of GDP in quarterly periods.

The main data sources used for estimation of changes in inventories are:

- F-01/I-01 quarterly reports on income, costs financial result and investment outlays for big units (above 49 employed) classified by materials, finished goods, work-in-progress, goods for resale for beginning of period and end of period.

- F-01/I-01 semi-annual reports on income, costs financial result and investment outlays for medium units (10-49 employed) (the scope is the same as for big units)
- SP-3 yearly report on economic activity of enterprise for small units (under 9 employed) (data on changes in inventories for whole economy).
- SP – yearly report of enterprises.
- data from Agency for Material Reserves.
- Business Tendency Survey in industry, construction and trade.

The estimation of changes in inventories is conducted for each type of inventories:

- materials, semi-finished goods, fuels (if not included in equipment), spare parts for machines (if not included in fixed assets), office and print materials;
- work-in- progress and semi-finished goods of own production;
- finished products, i.e., completed goods and services of own production, scientific and research works, project and survey-cartographic works, finished works, changes in plant and animal production as well as livestock (basic herd);
- commodities, i.e., goods for resale in their present state.

The estimations of changes in inventories are also done according to size classes of units: for units with more than 49 employees on the basis of F-01/I-01 report and for units with number of employees between 10 to 49 persons on the basis of semi annual reports F-01/I-01, i.e. after each second and fourth quarter of the year. In quarters, for which data are not available for medium size units (first and third quarter) changes in inventories are estimated according to the share of each type of inventories in medium size units in corresponding type of inventories in big units from the previous quarter. The average contribution is 21-22 %. As for small units, estimations are based on the share of changes in inventories in these units to changes in inventories in large units taken from the end of previous year. The average contribution is 42-44%. Changes in inventories are revised when annual data for small units are available from SP-3 report.

Within the algorithm of changes in inventories estimation holding gains and losses are derived. Holding gains and losses result from changes in the prices of assets. They occur on all kinds of financial and non-financial assets, and on liabilities. Holding gains and losses accrue to the owners of assets and liabilities purely as a result of holding the assets or

liabilities over time, without transforming them in any way. Holding gains and losses measured on the basis of current market prices are called nominal holding gains and losses.

Data from business survey at current prices for opening and closing date of each quarter are the basis in changes in inventories estimation and holding gains and losses as well. There are also used monthly price indices for section of the NACE rev. 1.1 with reference period=previous month. The deflation method ensures comparability of the data from the beginning and the ending of analyzed period.

An algorithm of estimations is shown below. This algorithm is applied for each type of inventories in big and medium units.

I step: nominal changes in inventories is derived

II step: opening value is deflated by monthly indices.

III step: closing value is deflated by monthly indices

IV step: real changes in inventories is derived

V step: Holding gains and losses are calculated.

Holding gains and losses influence not only the real value of changes in inventories but also the level of gross output and intermediate consumption of each section of NACE rev. 1.1.

Gross output contains two categories of changes in inventories:

- work-in-progress,
- finished products.

The value of changes in inventories mentioned above is corrected by value of holding gains respectively on work in progress and finished products.

The trade margin which is the part of output is corrected by the value of holding gains on goods for resale. Consumption of materials, which is the part of intermediate consumption is corrected by value of holding gains on materials.

5.4.3 Acquisitions less disposals of valuables (P53)

Bases for the quarterly estimates of acquisitions less disposals of valuables for the total national economy state: quarterly data on imports and exports, estimates of sold production, estimates done on the base of information from state budget acts and reports from the state budget performance, purchases of new valuables, as well as of value of issued and disposed for the collection purposes gold and silver coins.

Data on imports and exports is received from the foreign trade statistics about 45 days after the reporting period. Information covers Polish trade turnover with the European Union non-member countries – so-called third countries (EXTRASTAT system) as well as with EU member countries (INTRASTAT system)-see point 3.2.5.

Mentioned above, parallel systems constitute common, single and homogenous data set on foreign trade.

Basic data source in the frame of EXTRASTAT system is Single Administrative Document (SAD) which serves for registration of trade with third countries. INTRASTAT declaration which serves for recording of arrivals and dispatches in the framework of intra-EU trade is basic source of information supplying the INTRASTAT system.

Used in the foreign trade statistics Combined Nomenclature (CN) based on Harmonized Commodity Description and Coding System (HS) enables elaboration of data, the subjective scope of which is consistent with the included in the European System of Accounts ESA95 definition of valuables.

Annual information on sold production are the bases for estimates of quarterly data on it.

5.5 Exports and imports of goods and services (P6, P7)

International merchandise trade statistics are economic statistics which serve a variety of needs. These statistics together with other basic statistics, such as industrial statistics, construction statistics and financial statistics, provide an input to national accounts and balance of payments.

The statistics are based on methodological rules of Statistics Division UN.

According to general rule, international merchandise trade statistics record all goods which add to or subtract from the stock of material resources of a country by entering (imports) or leaving (exports) its economic territory.

It means that each physically flow cross border needs to be recorded by statistics. Foreign trade turnover includes value of goods entering and leaving the country within the framework of trade transaction as well as value of transport, construction and communication services, net processing turnover, printing services, financial intermediation services indirectly measured (FISIM) and others. Value of exports includes estimated balance of purchases made by Polish citizens abroad as well as purchases made by foreigners in Poland.

Since 1 May 2004 (since the day of Polish accession to EU), Polish foreign trade of goods is based on two parallel systems:

- EXTRASTAT system which used data registered on Single Administrative Document (SAD) – custom document and refers to Polish trade turnover with third countries (EU non-members countries);
- INTRASTAT system, which refers only to Polish intra-EU trade (trade with other EU Member States).

The basis data sources for foreign trade turnover of goods are:

- Single Administrative Document (SAD) (card number 2 and 7) for EXTRASTAT system;
- INTRASTAT declarations for dispatch and for arrival.

Furthermore, since 1 January 2006 in Polish foreign trade statistics alternative data sources are used. Alternative data sources apply to registration of specific movements of goods and are used for following purposes:

a) additional, supplementary sources of statistical information, used of control purposes and for supplementing the data derived from SAD documents and INTRASTAT declarations concerning trade in following goods:

- sea vessels – data obtained from Polish Permanent Registers of Ships conducted by Maritime Chambers at Voivodship Courts in Gdańsk and Szczecin,
- aircraft – data obtained from Civil Aircraft register of Poland conducted by the Civil Aviation Office,
- sea products, including purchase/sale of fishery which were the subject of trade transaction before being landed by sea-going vessels – data collected by the Fishery Monitoring Center in Gdynia,
- sole admitted source of information, serving for a base for foreign trade statistics in case of turnover in following commodities:
 - electricity and natural gas, data concerning these products are obtained from the statistical surveys conducted by the Energy Market Agency.

The registered turnovers are increased by a value of products not included in SAD, INTRASTAT AND other statistics. It includes products transported by tourists for further reselling, in volume not requiring customs documents and products in bigger volume,

transported without filling in SAD and INTRASTAT documents. In national accounts these turnovers are included in “hidden economy”.

Information on services turnover is acquired from NBP. It is increased by value of foreign trips- turnovers of tourist services consistent with balance of payments.

For estimation of product turnovers unregistered in SAD and INTRASTAT documents and foreign trips, data from Tourist Institute researches on foreigners expenditures in Poland and Polish expenditures abroad is used, and till 2003 – data from researches on border-zone traffic carried by CSO.

Values of foreign trade turnovers used in national accounts are consistent with balance of payments of NBP.

5.5.1 Constant prices estimates

Quarterly estimates at constant prices of previous year are done for goods and services separately. Exports of goods is deflated using exports index and imports of goods using import index for each quarter (the reference period is previous year). The indices are elaborated by Business and Prices Division of CSO.

Services for exports and imports are deflated with the use of price index of consumer goods and service for total economy.

CHAPTER 6. GDP COMPONENTS: THE INCOME APPROACH

In QNA the income approach of GDP is not calculated independently.

Data for compensation of employees, taxes less subsidies on production and gross operating surplus& mixed income is compiled quarterly by institutional sectors and sub-sectors.

According to the derogations for Poland, the deadline for the transmission programme for the table 103 is 2008 for the data of 2007.

CHAPTER 7. POPULATION AND EMPLOYMENT

7.1 Population

The population data are given in the table „ESA-0110-Q POL Population and employment” in position „Total population-persons”. Quarterly data on population are sent to Eurostat at 70 days after the reference period (according to ESA requirements). Generally this

variable is fully complied with ESA requirements, i.e. the total population of the country includes:

- nationals settled in the country;
- national civilians who are staying abroad for a period of less than one year (frontier workers, seasonal workers, tourists, patients, etc.) – regardless of a period of stay; since 1 January 2008 it will be adjusted;
- national students however long they study abroad;
- members of the country's armed forces stationed in the rest of the world
- nationals who are on the staff of national scientific bases established outside the geographic territory of the country;
- nationals who are on the staff of diplomatic missions abroad;
- national who are members of the crews of fishing boats, other ships, aircraft and floating platforms operating partly, or wholly, outside the economic territory.

The data do not include (*according to ESA requirements*):

- foreign civilians staying on the territory for less than a year (frontier workers, seasonal workers, tourists, patients, etc.) –regardless of a period of stay,
- foreign students however long they study in the country;
- members of the armed forces of foreign country who are stationed in the country;
- the foreign personnel of foreign scientific bases located on the geographic territory of the country;
- members of foreign diplomatic missions stationed in the country.

However, to ESA requirements in the fact that data do not include foreign civilians settled in the country for a period of one year or more (including the personnel of the Institutions of the European Communities and of international civilian organizations located within the geographic territory of the country), foreign military personnel working with international military organizations located within the geographic territory of the country, foreign technical assistance personnel on long -term assignments who work in the country and are deemed to be employed by their host government on behalf of the government, or international organization, which is actually financing their work (if they are not registered on permanent stay in Poland).? Beside, population of the country include: national civilians staying abroad for a period of one year or more, national military personnel working with international organizations located in the rest of the world and national technical assistance personnel on long-term assignments who work abroad and are deemed to be employed by their host

government on behalf of the government, or international organization, which is actually financing their work. Simultaneously, these data do not include residents.

The population data are given as average arithmetic of successive the quarter. The data are compiled on the basis of the results of national censuses as well as results of current reporting data on vital statistics (births, deaths) and estimation of migration – derivative using of data from above mentioned sources.

The method of balance estimation of the population size is used in periods between censuses (quarterly and annually). Making estimations of the population size for periods between censuses assumes adoption of the last census, i.e. as exit database for gminas, then calculating data with balance method by the following schema:

size of population for the beginning period (quarter) in gmina
+ live births
- deaths
+registering for permanent residence (from other gminas and from abroad)
-cancelling registration to other gminas and abroad
+(-) address changes of the population due to changes in the administrative division
= size of population at the end of reference period (quarter) in gminas.

The number of population is the sum of population from gminas (through powiats and voivodships).

The balance of population is made with the help the above mentioned method for two categories population of residence:

1. actually living
2. registering for permanent residence

Regardless of applying of residence of category– in both case - the population country is balanced at the same number.

Since 2002 (June 30) the balance of population has been based on the results of the last National Population and Housing Census (as of May 20, 2002). For 2000-2001 (as of June 30 and December 31) and for 1999 as of December 31 all data was recalculated (using balance method) on the basis of the results of the National Population and Housing Census 2002. For the years 1989-1999 (for 1999 as of June, 30) data was recalculated using estimate method including components of population balance.

Below are given sources which are used at the complying the quarterly population data. As above mentioned at the complying population data are used the derivative sources, i.e.

1. *The results of the last National Population Census*
2. *The results of current reporting data on vital statistics (births, deaths)*

2a) *Births*

- *Notification of birth*

2b) *Deaths*

- *Statistical certificates to notification of death*

3. *Estimations for inter-regional and international migration*

3a. *Inter-regional and international migration (for permanent residence) – the Population register (PESEL) conducted by the Ministry of Internal Affairs and Administration)*

3b *Inter-regional migration and international migration (for temporary stay) – Population registered for temporary stay above 3 months (a change since 2006, till 2005 – above 2 months).*

1.

Name of survey: <i>National Population Census</i>
Periodicity: <i>serial</i>
Time of availability of results: <i>the next year after the census</i>
Main variables used in QNA: <i>population</i>
Further adjustments made to the survey data: <i>using the administrative sources</i>

2a.

The source of data on birth is the basic document of Ministry of Health. “Notification of birth”, that is secondarily utilized by national statistics.

All births registered in the current year are included in statistical reporting for this year. It regards also children born after May 20,2002 (i.e. after the reference day of population census), but registered in the reporting year.

Name of data source: <i>Notification of birth</i>
Organization collecting the data, and purposes for which it is collected: <i>Preliminary document for making of birth certificate. The information on child birth – filled by a doctor.</i>
Periodicity: <i>monthly (preliminary data), quarterly (final data)</i>

Variables used for QNA: <i>alive births</i>

2b. The source of data on death is the basic document “Statistical certificate to notification of death”, that is in the part secondarily utilized by national statistics. Since January 1, 1997- in the medical practice and statistical reporting on morbidity and mortality – in Poland has been implemented the International Statistical Classification of Diseases and Related health Problems, tenth Revision (into the previous ICD-9). Regarding to this fact some changes were made in the field of organizational aspects as so in data processing of deaths.

Name of data source: <i>Statistical certificates to notification of death</i>
Organisation collecting the data, and purposes for which it is collected: <i>Preliminary document for making of death certificate. The information on death – filled by a doctor.</i>
Periodicity: <i>monthly (preliminary data), quarterly (final data)</i>
Variables used for QNA: <i>number of deaths (of which infants)</i>

3a

Name of data source: the Population register (PESEL)
Organisation collecting the data, and purposes for which it is collected: <i>Among others for statistical purposes.</i>
Periodicity: <i>quarterly</i>
Variables used for QNA: <i>registering and cancelling registration for permanent residence</i>

3b

Name of survey: <i>Population registered for temporary stay above 3 months</i>
Periodicity: <i>once a year</i>
Time of availability of results: <i>60 days after the reference period</i>
Main variables used in QNA: <i>registering and cancelling registration for temporary residence</i>
Further adjustments made to the survey data:

7.2 Employment

In the scope of ESA transmission programme quarterly data on employment are also needed. In this connection, these data there are in two tables, i.e. 0110Q and 0111Q.

First table consists data on population, economically active population, unemployment, total employment, employees and self-employed. Apart from the population data, all data are available on the basis of the Polish LFS, however the second table concerns data on employment but from enterprise surveys.

Taking into account that description should concern all data on employment, the first fragment of above mentioned will apply to variables “total employment”, “employees” and “self-employed” (national concept) which are compiled on the basis of Polish LFS. The

second fragment of description will concern domestic concept, i.e. the variable which are in the table 0111 Q – in the scope of employment.

- ***On the basis of Labour Force Survey (LFS)***

In the Labour Force Survey (LFS) data on employment concern all persons aged 15 years and more who in the reference week performed for at least 1 hour any work generating earnings or income, or assisted (without pay) in maintaining family agricultural farm or conducting family economic activity outside agriculture, as well as the persons who did not perform work in the reference week (e.g. due to sickness, vacation, a break in the enterprise activity, bad weather conditions), but formally had work. In the LFS the criterion of including among the employed is the fact of performing work, regardless whether this work is registered or unregistered; therefore, among the population of the employed are also included persons performing work in the “hidden economy”. Employment according to the LFS does not include workers living in the collective households (e.g. workers hostels), whereas according to the international standards, it covers persons (apprentices) employed on the basis of the contact for occupational preparation who receive remuneration during the occupational or training.

According to the International Classification of Status in Employment the following categories of the employed are distinguished:

- employers* – persons conducting their own economic activity and employing at least one employee,

- self-employed* –persons who conduct their own economic activity and do not have employees; since 2004 this has also included agents in all types of agencies,

- employees*-persons employed on the basis of an employment contract in public enterprise or by private employers,

- contributing family workers –persons who assist without pay in conducting the family economic activity.

Among employees in the LFS are also included persons conducting outwork and apprentices with whom the enterprise or natural persons signed a contract for occupational education or training for a particular job (if they receive payment).

Data are available since 1992 and sent to Eurostat. However, data for I and II quarter of 1999 are not available for Poland because survey was not conducted (due to the financial matters). Since the I quarter 2003 data of the LFS are generalized on the basis of the balance of population compiled based on the results of the Population and Housing Census 2002. Availability of data – 70 days after the reference quarter.

According to ESA requirements, variables for the total country is required , i.e. without breakdowns by NACE. But in Poland data on employment are also published among other by gender, age, education, occupations. These data are also available for territorial division (by voivodships), by ownership sectors.

The main objective of the Labour Force Survey is obtaining data on the size and structure of the labour resources. The base of the LFS methodology comprise definitions concerning economically active population, the employed and the unemployed, adopted by the Thirteenth International Conference of Labour Statisticians in October 1982, and recommended for use by the International Labour Organization. In the next years the scope of survey subjected to modifications which were result from adjusted to UE recommendations.

The survey objective is situation of the population from the point of view of economic activity of people, i.e. the fact of performing work, being unemployed or economically inactive in the reference week.

The Labour Force Survey is a probability sample survey. This allows generalization of the results over the whole population.

Since the fourth quarter of 1999 the LFS has been carried out as a continuous survey. This means that in every of 13 weeks in a quarter interviewers visit a determined number (currently it is 1900) of randomly sampled dwellings and collects data concerning economic activity during a preceding week. The survey covers all people at the age 15 years or more, living in the sampled dwellings. A sample of dwellings to be visited is changed every week. Weekly samples result from a random distribution of a quarterly sample into 13 parts. The quarterly sample currently amounts to 24 thousands dwellings. It was constructed in such a way that every one of 13 weekly samples is not only the same size but has also the same structure.

The survey is carried out with the use of two questionnaires:

- **ZG Households File** which is designed for each households living in a selected dwelling;
- **ZD questionnaire** that is completed for each person aged 15 years or more, member of a household in the sampled dwelling present in the household or absent for a period not exceeding 2 months.

Name of survey: <i>The Labour Force Survey (LFS)</i>
Periodicity: quarterly
Time of availability of results: 60-70 days after the reference quarter

Main variables used in QNA: economically active population, unemployment, total employment, employees and self-employed

Further adjustments made to the survey data: the scope of survey, methodology is specified in the UE regulations.

- *On the basis of enterprise surveys*

In the table 0111 Q data on employment (total employment, employees and self-employed) are required. At present data on average paid employment in full-time equivalent are given into the table 0111Q.

Data are available (since 1995) and sent to Eurostat at 70 days after the reference quarter (according to ESA transmission programme). As regards to ESA requirements, these data are presented by A6 breakdowns. In the case of quarterly data breakdowns by divisions are not required. But in the Polish publication, i.e. “Employment, wages and salaries in the national economy” there are also data on average paid employment (for growing period) by divisions.

The data are presented (in ESA programme transmission) for economic entities employing up to 10 persons or more (till 1999 – 6 persons and more).

Data on average paid employment accounted into full-time equivalent are compiled on the basis of three sources, i.e.

1. DG-1 (Report on business activity covers entities covering the enterprise sector¹ employing more than 50 persons and 10% sample of entities employing 10-49 persons) – for I, II, III quarters

2. Z-03 (Report on employment, wages and salaries concerns enterprises employing more than 9 persons, conducting activity in the frame of NACE -which are not covered of survey DG-1- and entities of budgetary sphere independently of the number of employed) - for I, II and III quarters

¹ The category –enterprise sector indicates those units which carry out economic activities in the following areas: forestry, logging and related service activities; sea fishing; mining and quarrying; manufacturing; electricity ,gas and water supply; construction; wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods; hotels and restaurants; transport of machinery and equipment without operator and of personal and household goods, computer and related activities, other business activities; collection and treatment of sewage and of other waste, sanitation, remediation and similar activities; recreational cultural and sporting activities and other service activities.

3. Z-06 (Report on employment, wages and salaries and hours worked concerns entities employing more than 9 persons and entities of budgetary sphere independently of the number of employed) – for IV quarter

Below, there is detailed description of sources used to compiled data on average paid employment.

The method of calculation of average paid employment (total) for I, II and III quarters

DG-1 (average paid employment in the enterprise sector + Z-03 (average paid employment in entities employing more than 9 persons, conducting activity in the frame of NACE (which are not covered of survey DG-1) and entities of budgetary sphere independently of the number of employed)) = ***average paid employment for each quarters (beside IV quarter).***

The method of calculation of average paid employment (total) for IV quarter

DG-1 (average paid employment in the enterprise sector + Z-06 (average paid employment in entities employing more than 9 persons and entities of budgetary sphere independently of the number of employed) = ***average paid employment for IV quarter.***

1. DG-01 Report on business activity

Name of survey: <i>Report on business activity</i>
Link to surveys undertaken at European level: <i>short-term statistics</i>
Periodicity: <i>monthly</i>
Time of availability of results: <i>22 days after the reference period</i>
Main variables used in QNA: <i>average paid employment</i>
Further adjustments made to the survey data: -

2. Z-03 Report on employment, wages and salaries

Name of survey: <i>Report on employment, wages and salaries</i>
Link to surveys undertaken at European level: -
Periodicity: <i>quarterly</i>
Time of availability of results: <i>60 days after the reference quarter</i>
Main variables used in QNA: <i>average paid employment</i>

3. Z-06 Report on employment, wages and salaries and hours worked

Name of survey: <i>Report on employment, wages and salaries and hours worked</i>
Link to surveys undertaken at European level: -
Periodicity: <i>annually</i>
Time of availability of results: <i>about 5 months after the reference year</i>
Main variables used in QNA: <i>average paid employment</i>

Moreover, the table 0111 Q consists data on employment –persons. Since 1st quarter of 2005 data on employment (total) – flash estimates- has been available and sent to Eurostat at 45 days after the reference quarter. According to ESA requirements, data should be also given by NACE. However, at present, the flash estimates by NACE are not available. But in accordance with received derogations –data on employment will be also available (since 2008) by NACE. Then data will be fully complied with ESA requirements.

.3 Employment : Hours worked

The table 0111 Q concerns among others data on total hours worked. According to ESA requirements, data on total hours worked should be given, but at present data for Poland concern hours worked of employees (not for employed persons and self-employed). Data on economic entities employing more than 9 persons. Since 2008 - with regard to received derogations-the CSO of Poland plans to be fully complied to ESA requirements.

The one of the main input of data on hours worked of employees for the aim of national accounts comes from the business statistics DG-1 (Report on business activity) and Z-03 (Report on employment, wages and salaries) and Z-06 (Report on employment, wages and salaries and hours worked).

Data on hours worked of employees are available since I quarter of 2002, at 70 days after the reference quarter (according to ESA requirements). In the table 0111Q, hours worked by sections of NACE are needed. Data refer to hours worked with the reference to employees working on the basis on labour contract (full-time employees and part-time employees converted into full time basis).

Data are not seasonally adjusted.

As above mentioned, the main source in the case of hours worked is the monthly business activity (DG-1 –report on business activity) and quarterly report on employment, wages and

salaries (Z-03) and annual report on employment, wages and salaries and hours worked (Z-06).

First survey covers entities covering the enterprise sector² employing more than 50 persons and 10% sample of entities employing 10-49 persons.

The monthly report concerning economic activity of enterprises covers among others the following information:

- revenue from selling own products (goods, services)
- value of manufactured goods which are not sold but are treated in a similar fashion
- persons employed
- average paid employment
- wages and salaries
- paid working time for employees
- excise taxes
- product subsidies received.

All data collection is done by postal questionnaire and electronic too. Monthly questionnaires are sent to reporting units once a year, in January. The units have to send their answers to the voivodships (regional) statistical office by the 5th working day after the end of the reference month. The data collecting authority closes the survey 9 working days after the end of the reference month.

1. DG-1 Report on business activity

Name of survey: <i>Report on business activity</i>
Link to surveys undertaken at European level: short-term statistics
Periodicity: monthly
Time of availability of results: 22 days after the reference period
Main variables used in QNA: paid working time for employees
Further adjustments made to the survey data: -

2. Z-03 Report on employment, wages and salaries

² The category –enterprise sector indicates those units which carry out economic activities in the following areas: forestry, logging and related service activities; sea fishing; mining and quarrying; manufacturing; electricity ,gas and water supply; construction; wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods; hotels and restaurants; transport of machinery and equipment without operator and of personal and household goods, computer and related activities, other business activities; collection and treatment of sewage and of other waste, sanitation, remediation and similar activities; recreational cultural and sporting activities and other service activities.

The survey on employment, wages and salaries (Z-03) concerns enterprises employing more than 9 persons, conducting activity in the frame of NACE (which are not covered of survey DG-1) and entities of budgetary sphere independently of the number of employed.

Name of survey: <i>Report on employment, wages and salaries</i>
Link to surveys undertaken at European level: -
Periodicity: quarterly
Time of availability of results: 60 days after the reference quarter
Main variables used in QNA: hours worked

3. Z-06 Report on employment, wages and salaries and hours worked

The survey concerns entities employing more than 9 persons and entities of budgetary sphere independently of the number of employed.

Name of survey: <i>Report on employment, wages and salaries and hours worked</i>
Link to surveys undertaken at European level: -
Periodicity: annually
Time of availability of results: about 5 months after the reference year
Main variables used in QNA: hours worked

In the end, the method of calculation of hours worked of employees (total) for I, II and III quarters

DG-1 (hours worked in entities in the enterprise sector) + Z-03 (hours worked in entities employing more than 9 persons, conducting activity in the frame of NACE (which are not covered of survey DG-1) and entities of budgetary sphere independently of the number of employed)) = hours worked for each quarters (beside IV quarter).

The method of calculation of hours worked (total) for IV quarter

DG-1 (hours worked in entities in the enterprise sector) + Z-06 (hours worked in entities employing more than 9 persons and entities of budgetary sphere independently of the number of employed) = hours worked for IV quarter.

CHAPTER 8 FROM GDP TO NET LENDING AND BORROWING

It is not applied in QNA.

CHAPTER 9 FLASH ESTIMATES

Presently, flash estimates are not applied. In 2009 CSO is taking up work on compiling GDP flash estimates in QNA. The survey on flash estimates has been included in Statistical survey program of official statistics (PBSSP) in 2009. The results of the work will be published in 2010.