Blv. Zhan d'Ark , No. 3
Tirana, 1001
Tel: +355 4 2222 411
Faks: +355 4 2222 411

info@instat.gov.al
www.instat.gov.al

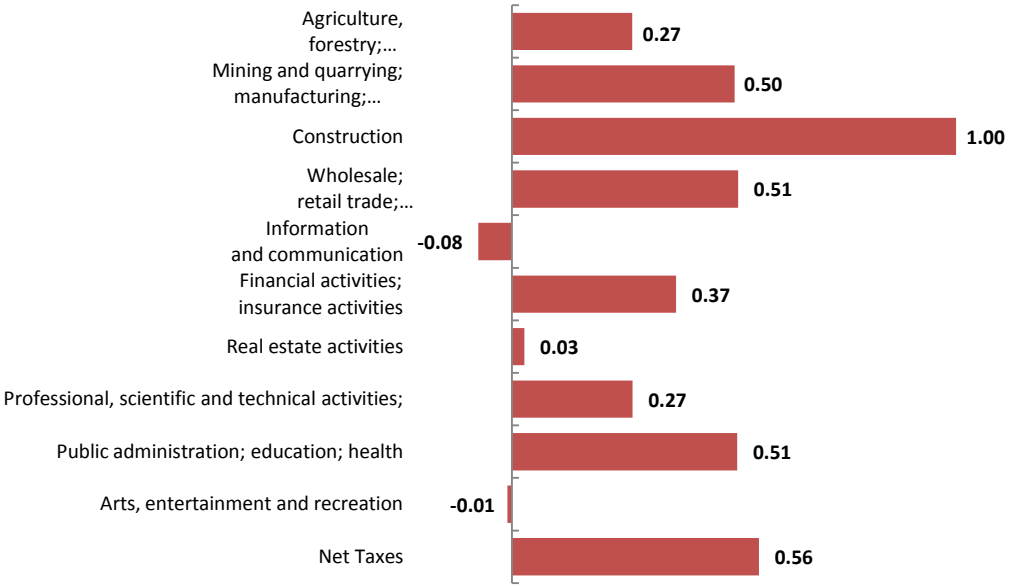
INSTAT
Republika e Shqipërisë
Instituti i Statistikave

Quarterly Economic Growth

First Quarter, 2017

Tirana, June 30, 2017: Gross Domestic Product (GDP) in the first quarter of 2017 in volume terms has increased by 3.94 % compared with the first quarter of 2016. The main contribution to this increase gave the branches of the economy such as Construction by +1.00 percentage point, *Trade Hotels and Restaurants* and *Transport* by +0.51 percentage point, *Public administration, Education and Health* by +0.51 percentage point, *Industry, Electricity and Water by* +0.50 percentage point, *Financial and insurance services* by +0.37 percentage point, *Agriculture, Forestry and Fishing* by +0.27 percentage point, *Professional services* and *Administrative services* by +0.27 percentage point, *Real estate activities* by +0.03 percentage point. The branches that gave a negative contribution are *Other services* by -0.01 percentage point and *Information and Communication* by -0.08 percentage point. *Net taxes* on products contributed positively by +0.56 percentage point.

Fig. 1 Contribution of the main branches of the economy to real growth rate of GDP (Q1_2017 / Q1_2016)



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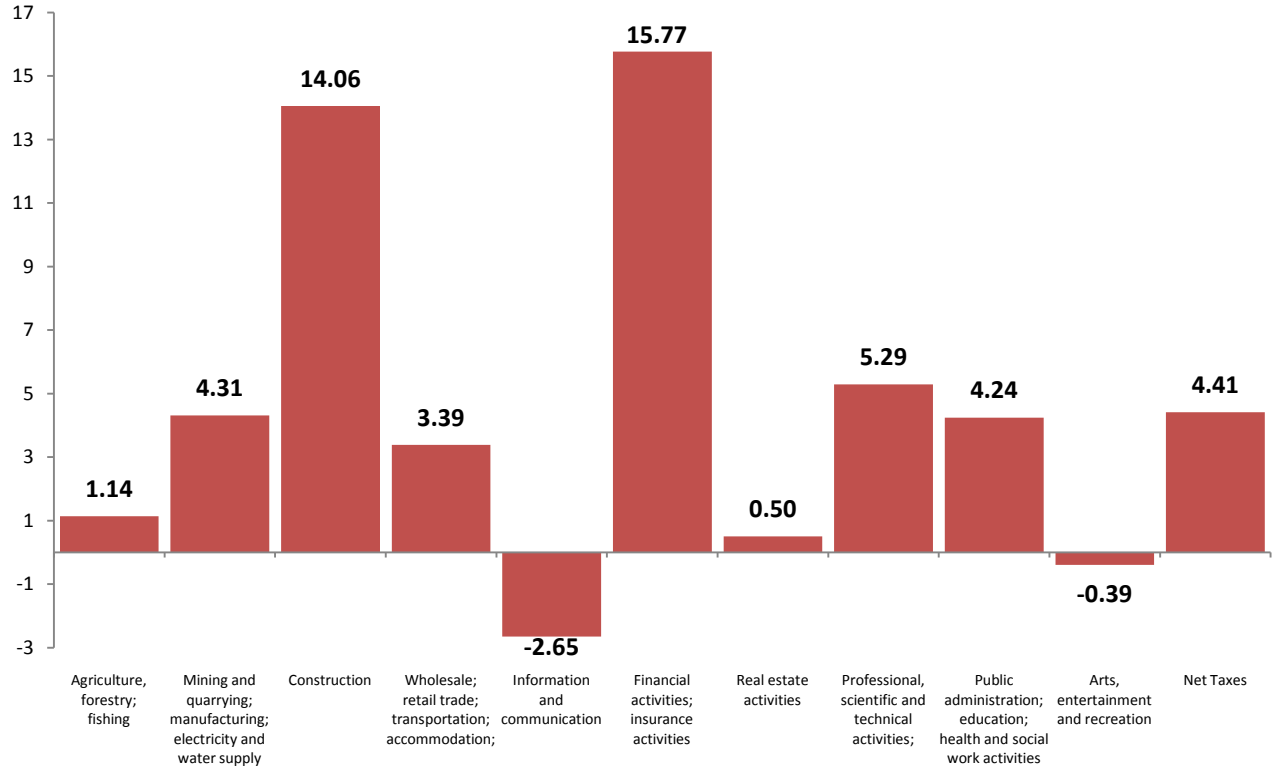
The main branches of the economy for the first quarter of 2017 compared with the first quarter of 2016 appeared as follows:

Agriculture, Forestry and Fishing activity appeared to increase by 1.14 %. The group of *Industry, Electricity and Water*, increased by 4.31 % where the main contribution gave the sub group of *Electricity* which increased by 10.81 % and M*anufacturing Industry* by 3.41 %, while *Mining Industry* following negative performance marking the decrease by 3.93 %. *Construction* activity appeared to increase by 14.06 % influenced by public and private investments mostly related to TAP project. The group of *Trade, Hotels and Restaurants* and *Transport* appeared to increase by 3.39 % influenced mainly by wholesale trade and ground transport. The group of *Information and Communication* appeared to decrease by 2.65 %. *Financial and insurance* activity had an increase by 15.77 %. *Real estate* activity appeared to increase by 0.50 %. The group of *Professional services and Administrative services* appeared to increase by 5.29 %. The group of *Public administration, Education and Health* increased by 4.24 % influenced mainly by health while education had a slow decrease. The group of *Arts, entertainment and recreation services, and repair of household's good* and other services appeared to decrease by -0.39 %. *Net Taxes* on products had an increase by 4.41 %.

Fig .2 Changes to the same quarter of 2016 for the main branches of the economy, (Q1_2017/ Q1_2016) in %



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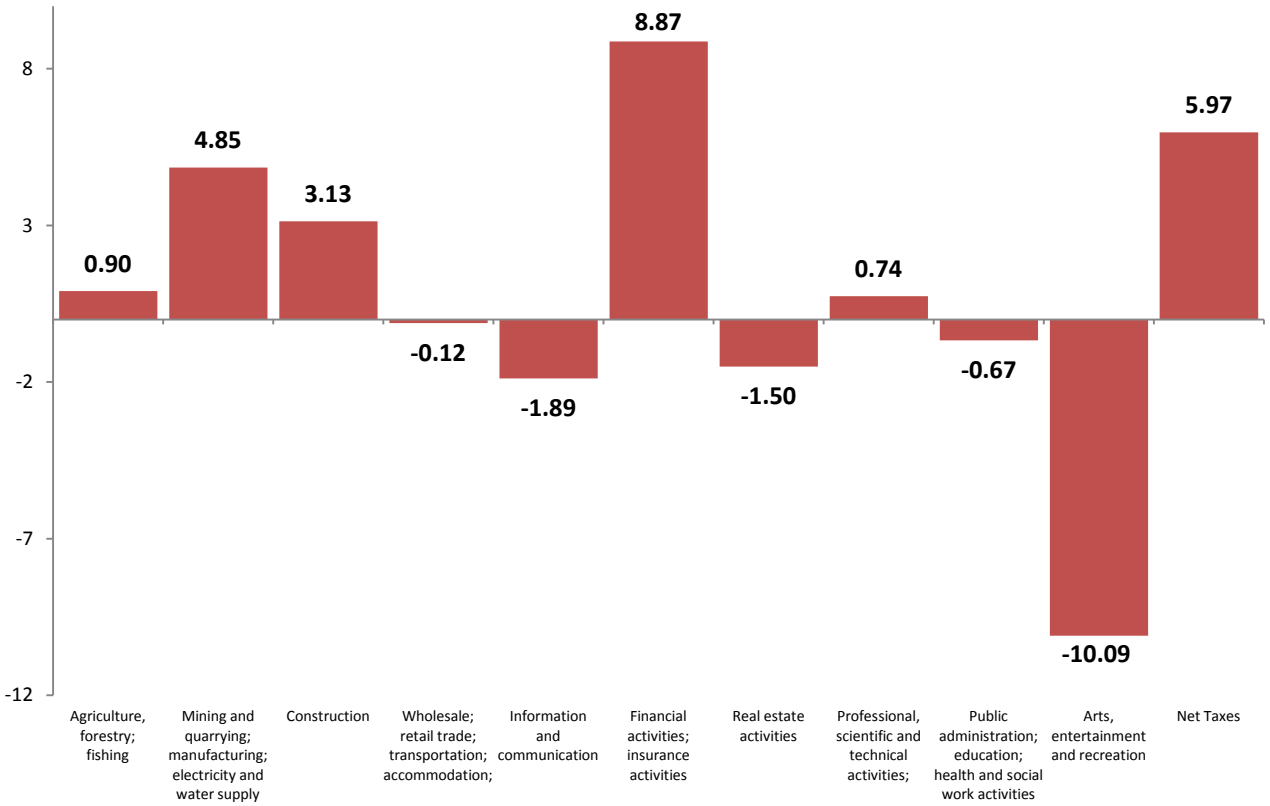
Regarding the changes to the preceding quarter, the indicator of Gross Domestic Product increased by 0.74 % compared with the fourth quarter of 2016.

Agriculture, Forestry and Fishing activity had an increase by 0.90 %. The group of *Industry, Electricity and Water* appeared to increase by 4.85 %. *Construction* activity had an increase by 3.13 %. The Group of *Trade, Hotels and Restaurants* and *Transport* appeared to increase by 0.12 %. The group of *Information and Communication* had a decrease by 1.89 %. *Financial and insurance* activity increased by 8.87 %. *Real estate* activity appeared to decrease by 1.50 %. The group of *Professional services and Administrative services* appeared to increase by 0.74 %. The group of *Public administration, Education and Health* appeared to decrease by 0.67 %. The group of *Arts, entertainment and recreation services, repair of household's good and other services d*ecreased by 10.09 %.
Net Taxes on products increased by 5.97 %.

Fig.3 Changes to the preceding quarter of 2017 for the main branches of the economy (Q1_2017/Q4_2016) in %



Quarterly GDP by Expenditure Approach

The main components of GDP by expenditure approach for the first quarter of 2017 compared to the same quarter of 2016 appeared as follows:

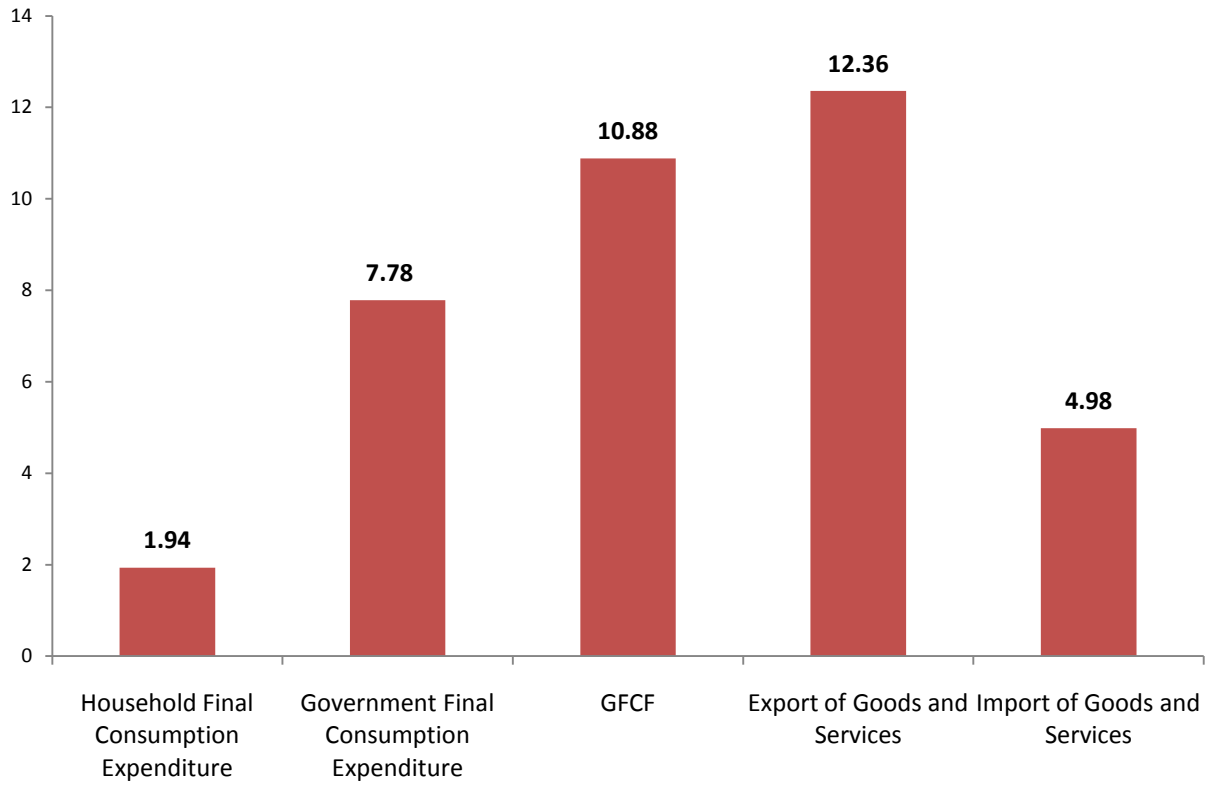
Household final consumption which shares an important part in total economy appeared to increase by 1.94 %.

General Government consumption appeared to increase by 7.78 %.

Gross Fixed Capital Formation increased by 10.88 %.

Exports of goods and services increased by 12.36 %, while *Imports of goods and services* increased by 4.98 %.

Fig.4 Changes to the same quarter of 2017 for the main components of GDP by expenditure approach, (Q1_2017/ Q1_2016) in %



Methodology

The current and constant measures of Quarterly GDP are consistent with the annual national accounts and are based on the same concepts and principles. The estimates in this publication are based on data available until June 2017. The main data sources that are used to estimate GDP are in general administrative data and various infra-annual data collected by INSTAT's surveys. The series are subject to revisions in the future as additional or improved information becomes available.

The objective of the quarterly data in time series format is to give dynamic information about the economy. The publication includes estimates of quarterly GDP at constant prices (changes in volume of the quarterly GDP) added Net Taxes (taxes and subsidies on products). The volume measures are expressed at average prices of the previous year and chain-linked with the reference year, (2010=100). The estimates of quarterly GDP are compiled in both original and seasonally adjusted formats. The method used to estimate quarterly GDP is considered an indirect method.

Is considered as an indirect method because the available data sources are used to estimate quarterly value added based on the selected quarterly indicators by application of mathematical methods and statistical techniques. Specifically, the applied indirect method is based on the assumption that the proportion between the value added and output is constant within the period of estimation. In some specific branches like *Electricity, Public Administration, Education, Health and Financial Activities*, is used the direct method which estimates the output and intermediate consumption separately, with subsequent calculation of value added as a difference.

Sequence of compilation

In the indirect method the chronological order may change, but the most used is as follows:

i. Constructing the quarterly indicators at current and constant prices from different sources for the appropriate recent periods;

ii. Development of time series for quarterly data at current and constant prices in order to ensure data comparability and consistency over time;

iii. Benchmarking the non-seasonally adjusted series to the relevant annual series;

iv. Eliminating the seasonality from the aggregated quarterly time series.

It is worth mentioning that the sum of seasonally adjusted quarters is not necessarily equal to the annual GDP for any particular year. Under normal circumstances, there will be enough variation in seasonality and/or trading day effects to explain a gap between the two.

Volume measures

Quarterly National Accounts, to ensure better consistency with the Annual estimates, as well as complying with ESA 2010, the volume measure of quarterly time series are expressed in average prices of the previous year and chain-linked reference year (2010=100).

General procedure of volume measures calculation consists of two steps: First figures at current prices are converted to previous year's average prices using appropriate price indices. Figures at previous year's prices are then chain-linked, with the reference year (2010=100), in order to obtain comparable time series of volume measures over time. This approach was introduced for the first time in quarterly accounts during the publication of the first quarter 2014. In the past, different approach was applied, where current price data were converted to constant prices of the fixed base year (the base year was 2005).

Chain-linking of quarterly figures is performed using the Annual Overlap technique, i.e. figures at previous year's prices are scaled down to the average price level of the chosen reference year using annual deflators. This technique is used in the majority of member states of the European Union. Chain linking means constructing long run volume measures by cumulating movements in short term indices with different base periods. The chain-linking of quarterly GDP data with fixed reference period (2010=100) allow different periods to be compared in a consistent manner and provide measures of long-run changes. However, the users should be aware of the phenomena of (non- additivity problem) of chained data.

For example if quarterly time series of GDP at current and constant prices with average prices of the previous year are additive, where total GDP is the sum of the components, for chain linking series, with fixed reference period (2010=100) the total GDP will be non-additive.

Following international methodology, the real growth rate is estimated using quarterly chain-linked series, with the reference year 2010 (2010 = 100).

Benchmarking

The aim of benchmarking is to ensure the consistency between Quarterly and Annual National Accounts. It should be applied to both current and constant prices, where quarterly values are expressed at the same base year as the annual data. It has to be underlined that the benchmarking alters the original figures, and consequently the volume growth of the aggregates, influencing in this way the chain-linked adjusted results.

Benchmarking of quarterly GVA figures (from Q1 2008 to Q4 2015), according to the revised annual data for the period from 2008 to 2015, was carried out by using the XLPBM Excel programme. The XLPBM Excel programme has been developed by the IMF and provides a set of mathematical and statistical techniques which are used for temporal disaggregation of data series. During the process of adjustment, the discrepancy between estimated

quarterly data and final annual data is minimized. The result is the achievement of consistency of quarterly and annual data, that is, the sum of quarterly data is equal to annual data in every year.

Seasonal adjustment

One of the major characteristics and issues of quarterly national accounts is seasonality. There are two methods for eliminating the seasonal effect from quarterly series.

Indirect method:

The level at which series are seasonally adjusted is important, since it has the potential to affect the quality of that seasonally adjusted series. The individual component series of the main economic variables can be seasonally adjusted and then summed to derive totals. This is called an indirect seasonal adjustment. The indirect approach has the advantage of retaining additive, but this applies only to the current price series. Although the indirect approach conceptually also provides additively for volume series.

Direct method:

Alternatively, the main economic variables can be seasonally adjusted at the total level, independently from the seasonal adjustment of their components. The adjustment of the total of an aggregate series is called a direct seasonal adjustment.

The direct approach often gives better results if the component series show similar seasonal patterns. At the most detailed level, the irregular factor may be large compared with the seasonal factor and therefore makes it difficult to perform proper seasonal adjustment.

In a small country such as Albania, irregular events can have strong impact on particular data. However, if the component series show the same seasonal pattern, aggregation often reduces the impact of the irregular factors in the component series. This is particularly relevant for Albania, where many economic series are affected by same seasonal fluctuations in the primary industries. INSTAT applied direct method for seasonal adjustment of quarterly time series.

The program used for seasonal adjustment of time series is JDemetra +, method TRAMO / SEATS, this program was developed by EUROSTAT.

Revisions policy

One of the most important moments of the quarterly series is revisions policies. These revisions are related with quarterly and annual data changes. Revisions to the previously published series may be made each quarter. The frequency and cause of these revisions are as follows:

Quarterly revisions

As additional data become available for the last quarter, they have their impact on the previous quarters because: data reported for the last quarters are supported by additional source data or improvements/corrections to data for previous nearest quarters were performed. It is necessary to mention that most of the data used for quarterly estimations are administrative data.

Including the last quarter data in the series and subsequent application of the seasonal adjustment will result in some changes to the previous quarters.

Annual revisions

Quarterly data are benchmarked to the annual one, and revisions to annual data will influence the quarterly series. Revisions to annual data are subject to arrival of new annual data sources or improvements of the existing ones. One year has three steps of estimation; flesh, semi final and final. Changes that happen during these steps have their direct effect on the quarterly series. The flash estimations of the current year are available 11 months after the end of the reported year, semi final are available with a time discordance of 17 months and the final version - within 29 months. Revisions to quarterly series are linked to the production cycle of annual estimates.

Methodological revisions

Revisions of quarterly series due to changes in methodology are to the extent possible coinciding with the annual cycle of revisions outlined above.

In addition, each of the above causes of revisions, and/or the incorporation of new series in the actual quarterly series, has the potential to alter seasonal factors and therefore may lead to a revision in the seasonally adjusted series.

Definitions

Gross Domestic Product (GDP): Gross Domestic Product at market prices, is the final result of production activity of productive resident units during a year. It is calculated in two approaches:

- GDP according to production approach is equal to sum of gross added values relevant to different kinds of activities, adding taxes and subtracting subsidies on products (not distributed to sectors or branches of a certain activity);

- GDP according to expenditure approach is equal to final domestic usage of products and services (final consumption, gross fixed capital formation, changes in inventories), plus exports, minus imports.

Output: production is an activity carried out under the control, responsibility and management of an institutional unit that uses inputs of labour, capital and goods and services to produce outputs of goods and services. The total of products created during the accounting period is considered as output. There are three types of output such as: market output; output produced for own final use; non-market output.

Intermediate consumption: Intermediate consumption consists of goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital. The goods and services are either transformed or used up by the production services.

Gross Value Added: Gross Value Added represents the contribution of different activities in GDP and is calculated as the difference between the output and intermediate consumption.

Nominal GDP: measures the current market value of a country's gross domestic product.

Real GDP: measures the volume level of a gross domestic product after changes in prices have been taken into account. It is obtained by expressing values in terms of a base period or previous period prices.

Taxes on products and imports: Taxes on products are paid taxes per unit of some goods and services like the Value Added Tax, excise and customs' tax on imports. Subsidies on products and imports:

Subsidies on products are non-reverse payment made by public administration units to the companies in the form of a certain amount of money per unit of goods or services. Subsidies on imports consist in subsidies of goods or services payable when the product surpasses the border of economic territory or if the services were made to resident institutional units.

Basic prices: is the price receivable by the producer from the purchaser for a unit of a good or services produced as output, minus any tax payable and plus any subsidy receivable on product. It excludes any transport charges invoiced separately by the producer.

Market prices: is the price after adding taxes and deducting subsidies on products.

Current prices: Prices of reference period. They represent the price paid for goods and services during the time of production or consumption.

Constant prices: Estimation in constant prices represents the estimation in real terms, deflated with prices of a base year or of the previous year.