

A CRITICAL ANALYSIS OF THE REAL GDP

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Abstract

In recent times, especially with the transition of socialist economies into markettype economy, the economic theory is introduced and the category of gross domestic product (GDP).

Gross domestic product is the world standard and has been adopted by the System of National Accounts of the United Nations, the European Union, – OECD, the World Bank and the International Monetary Fund. GDP includes tangible and intangible production, ie. an aggregate term value of final goods and services produced in a year. GDP is used extensively in economic analysis and in the public economic discourse. More recently a particular version of GDP – per capital GDP measured in international purchasing power parity prices – has been used for international comparisons, and it has been argued that it is the relevant economic goal. Thus the target of ‘the top half of the OECD’ by some target date is to be evaluated by this measure.

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Introduction

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1. Relevant economic principles, concepts and theories

Gross domestic product (GDP) is the annual aggregate money value of all final goods and services produced by the economy. GDP changes over time when the output of goods and services changes, and when the prices of these goods and services change.

Economic growth occurs when the total output of goods and services increases. Since a change in GDP can be caused by a change in prices rather than a change in output, in order to measure economic growth we must adjust GDP for the effects of inflation. Inflation-adjusted GDP is called real GDP, and it is computed by dividing nominal GDP by the relevant price index.

GDP is the most prominent indicator derived from the System of National Accounts (SNA). As such, it is embedded in a comprehensive data base which attempts to characterise the main movements in the economy by statistical measures of income, production and expenditure at the aggregate, sectoral and industry level.

Although this is not always evident in the popular discourse, economic analysis sees the various elements of the SNA interacting with each other – behaviourally as well as mathematically – and the GDP as a summary indicator of the interactions. (http://www.eastonbh.ac.nz/2004/08/the_relevance_of_gdp/)

The process of calculating GDP:

- adding all final goods and services at current prices, or
- adding value added (value added) of the company, or
- adding the factor income of all companies

Use:

- personal consumption
- government or public spending
- investment
- net exports (positive difference between exports and imports).

2. The value of GDP

The value of GDP can be determined, nominal and real values.

Real GDP (the value of GDP at a base year price level) is most often used to compare a single economy's output at various points in time. However, it is not uncommon to use real GDP to compare economies or to use nominal GDP to evaluate a single economy's history. It is important to not only understand the difference between real GDP and nominal GDP, but the difference between real and nominal as well.

Nominal GDP is GDP evaluated at current market prices. Therefore, nominal GDP will include all of the changes in market prices that have occurred during the current year due to inflation or deflation. Inflation is defined as a rise in the overall price level, and deflation is defined as a fall in the overall price level. In order to abstract from changes in the overall price level, another measure of GDP called real GDP is often used.

3. Real GDP calculations

Official publications present real value-added (GDP) through a chain method whereby each year's value-added at current prices is recalculated at the previous year's prices, not a fixed year's prices. Thus, no complete and updated series exists for real value-added in level; only real growth rates for the main economic sectors and output tables for the subsectors are published.

We then simply calculate each sector's contribution to growth as that sector's real rate of growth multiplied by its share in GDP of the previous year at current prices, for each year. Similarly, we calculate the contribution of final uses of GDP based on their respective real growth rates and their shares in total GDP of the previous year at current prices. Changes in stocks are incorporated in private sector investment assuming a similar price deflator. (<http://www.imf.org/external/country/LBN/rr/2011/030311.pdf>)

Real GDP is calculated as the product of the physical volume of production and price, but it did not cost in each of those years (current prices), but fixed prices. It may be the price to-any in years, which indicates that the annual amount of real GDP were different, depending on which of the current prices are used as permanent not price. However, then the rate of change in real GDP unchanged. (Josifidis, Djukic, 1994.)

4. Disadvantages of Real GDP

Real GDP does not measure all factors that influence in market. Household production is excluded from GDP, because these activities are not traded in markets. Examples are cooking, cleaning the rooms, fixing a water leak yourself, mowing the lawn yourself, taking care for children, growing vegetables, etc. This is known as Non-Market production. For instance if you choose to purchase television instead of growing your own food and now have to purchase it, in this case value of your food will be include in GDP.

(<http://www.investopedia.com/exam-guide/cfa-level-1/macroeconomics/limitations-gdp-alternative.asp>) Consequently GDP undervalue total production since it not include household production and therefore overvalue the growth rate of total production. This is happen owing to market production, which is part of GDP, is replacing household production, which is not part of the GDP. Two trends demonstrate this. First is jump in female employment in recent times. The second is purchasing more and more home-produced goods and services. For example nowadays more families eat out; usually they eat in fast-food restaurants.

The underground economy is business activity that cause unreported revenues and take place outside of the established laws, regulations and other legal and financial obligations that are related with the industry. Due to this it is excluded from the GDP. Underground economy includes production and distribution of soft and hard drugs, paying labour force less than the minimum wage, prostitution, avoiding paying income taxes. It is estimated that the scale of the underground economy is between 3.5 and 13.5 per cent of GDP in the United Kingdom. (Parkin, Powel, Matthews, 2008) When there are high taxes or if regulations are very restrictive, the underground economy will be broadened. Conversely the underground economy will be reduced if there is reduction of taxes and regulations. Such as during the 1980, when taxes were reduced people to a greater extent were reporting incomes. Therefore in the 1980 increasing of GDP was

because of shift from the underground economy not due to rise in production. Survey shows that Nigeria and Thailand have the world largest black economy- more than 70% of GDP. Apart from this real GDP falls in showing how the income is distributed. For this reason GDP does not decrease gap between poor and rich people. However there is the Gini coefficient which shows the equality of income. The world's most unequal region is Latin America where Gini coefficient is around 0.5, whereas is developed countries is about 0.3.

Life expectancy at birth reached 80 years in 2010, a gain of more than 10 years since 1960. (<http://www.oecdbetterlifeindex.org/topics/health/>) Although health and life expectancy are not included directly in the real GDP we can conclude that higher GDP influences on better medical research, healthcare, healthier good and better exercise equipment. Improved life expectancy has contributed betterment in other determinants especially living standard, environmental improvement, lifestyle changes and better education. But unfortunately now we have new problems health problems, particularly AIDS, suicide, drug abuse and etc. We can conclude that real overextend improvement in the standard of living.

Leisure time is very important for the economy since it contributes to our economic well-being. If we have more leisure time we are in better situation. For instance people can work 12 hours so country would increase its output. But this might not mean that people will be better off since they have no leisure time to enjoy it. (<http://econperspectives.blogspot.com/2008/08/limitations-of-using-gdp-as-measure-of.html>) Our working time is calculated as part of the GDP but our leisure time is not. Furthermore through the years leisure time has increased constantly. We can take for instance some people who take early retirement or taking more holidays. And these improvements in the economy are not calculated in the GDP.

GDP does not calculate the quality of the environment. "GDP seems to represent economic growth at all costs." (<http://sites.psu.edu/kaylasusko/2013/01/18/no-gdp-of-a-nation-without-environmental-representation/>) If we persistently make more and more products we cause animal endangerment, flooding, deforestation, we pollute water, decrease the likelihood of an energy sustainable future by promoting a great use of fuels, etc. All these things cause harm to our environment and damage our potential to be a sustainable world. It does not necessarily mean that as we become richer we pollute the environment. Some rich people appreciate clean environment and they are willing to pay for that.

Another point worth mentioning is that Real GDP does not adequately display quality of products. For instance nowadays television set is much superior to 10 years ago. In addition to this GDP does not show changes in quality particularly: airplane safety, cars, hotel rooms, etc. Also GDP does not show quality of life. Countries with small GDP usually have infants with low birth weight, higher rate of infant mortality and worse education.

5. Impact on other variables

A GDP component as it is, consumption has an immediate impact on it. An increase of consumption rises GDP by the same amount, other things equal. Moreover, since current income (GDP) is an important determinant of consumption, the increase of income will be followed by a further rise in consumption: a positive feedback loop has been triggered between consumption and income.

An autonomous increase of consumption, if at the same level of income, would reduce savings, but the positive loop just described (known as the "Keynesian multiplier") will simply an increase of income level with a positive impact on future savings.

If directed to goods and services produced abroad, an increase of consumption will immediately push up imports, while a similar indirect effect will result from consuming domestic products requiring foreign raw materials, energy, semi-manufactured goods.

Since usually the States separately tax consumption (say with a VAT tax), an increase of consumption will also boost this type of State revenue, as well as import duties revenue in the case of imported goods. The growth mechanism of consumption-income will also provide State revenue through income taxes.

To the extent firms decide to invest forecasting future demand and comparing it with present production capacity, an increase of consumption may induce new investment. In particular:

1. soaring consumption rises the production capacity utilization, with positive effects on profits;
2. it improves expectations on future demand;
3. it improves the financial conditions for funding investment both through profits and loans.

If exports are a second-best solution for domestic firm, an increase of domestic consumption might decrease export, since at the same level of production firms would prefer to sell inside the country. To verify this by yourself, try and play "You are an exporter".

Consumer dissatisfaction with current products can lead to faster adoption of new products, thus intertwining the whole new product development cycle.

An increased total market demand may induce firms to increase prices, the more so when they operate at full production capacity or they operate on monopolized markets. Thus increased price level and accelerated inflation can be an effect of booming consumption. (<http://www.economicwebinstitute.org/glossary/cons.htm>)

6. Measuring GDP there are The Expenditure Approach and The Income Approach

There are two ways of measuring GDP, the expenditure approach and the income approach. The expenditure approach is to add up the market value of all domestic expenditures made on final goods and services in a single year. Final goods and services are goods and services that have been purchased for final use or goods and services that will not be resold or used in production within the year. Intermediate goods and services, which are used in the production of final goods and services, are *not included* in the expenditure approach to GDP because expenditures on intermediate goods and services are included in the market value of expenditures made on final goods and services. Including expenditures on both intermediate and final goods and services would lead to double counting and an exaggeration of the true market value of GDP.

Total expenditure on final goods and services is broken down into four large expenditure categories, according to the type of good or service purchased. The sum total of these four expenditure categories equals GDP. These four expenditure categories are

1. Consumption expenditures: Personal consumption expenditures on goods and services comprise the largest share of total expenditure. Consumption good expenditures include purchases of nondurable goods, such as food and clothing, and purchases of durable goods, such as appliances and automobiles. Consumption service expenditures include purchases of all kinds of personal services, including those provided by barbers, doctors, lawyers, and mechanics.

2. Investment expenditures: Investment expenditures can be divided into two categories: expenditures on fixed investment goods and inventory investment. Fixed investment goods are those that are useful over a long period of time. Expenditures on *fixed investment goods* include purchases of new equipment, factories, and other nonresidential housing as well as purchases of new residential housing. Also included in fixed investment expenditures is the cost of replacing *existing* investment goods that have become worn out or obsolete. The market value of all investment goods that must be replaced in a single year is referred to as the depreciation for that year. *Inventory goods* are final goods waiting to be sold that firms have on hand at the end of the year. The year-to-year change in the market value of firms' inventory goods is considered investment expenditure because these inventory goods will eventually yield a flow of consumption or production services.

3. Government expenditures: Government expenditures on consumption and investment goods and services are treated as a separate category in the expenditure approach to GDP. Examples of government expenditures include the hiring of civil servants and military personnel and the construction of roads and public buildings. Social security, welfare, and other transfer payments are not included in government expenditures. Recipients of transfer payments do not provide any current goods or services in exchanges for these payments. Hence, government expenditures on transfer

payments do not involve the purchase of any new goods or services and are therefore excluded from the calculation of government expenditures.

4. Net exports: Exports are goods and services produced domestically but sold to foreigners, while imports are goods and services produced by foreigners but sold domestically. In the expenditure approach to GDP, expenditures on exports are added to total expenditures, while expenditures on imports are subtracted from total expenditures. Alternatively, one can calculate a net export, which is defined as expenditures on exports minus expenditures on imports, and add the value of net exports to the nation's total expenditures. (http://www.cliffsnotes.com/study_guide/GDP.topicArticleId-9789,articleId-9733.html)

7. Macroeconomic indicators in Serbia in the period of transition

Transition in Serbia began in 2000, when they acquired the basic conditions for its implementation. The liberalization of trade relations and capital account balance has enabled the integration of economic systems of Serbia in international financial and trade flows. Initiated changes in the economic domain, though under the influence of many factors that influence them have depreciation, assumed the character of irreversible processes.

The reform of the economic system, it is difficult to return to the starting position, but rather to talk about her fluctuating tempo and instruments of macroeconomic policy, which often need to establish a balance between the diametrically opposed economic goals.

Serbia improved its ranking moving up 24 places to 68th position out of 175 countries ranked by business conditions in the world, according to a survey of the World Bank and the International Finance Corporation (IFC) in the report "Doing Business 2007" (Doing Business 2007). Serbia has surpassed all former Yugoslav republics except Slovenia. Although implemented many changes, Serbia has lost its place in the reforms that it had in last year's report. The World Bank states that the major changes introduced Serbia electronic data storage in customs affairs, enabling the electronic issuance of declarations and shorten the process of importing from 44 to 12 days and exports from 32 to 11 days.

Reforms have reduced the credit risk Serbia and enable entrepreneurs to borrow more easily than before. As for the security of investors, Serbia is 60, Bosnia and Herzegovina on 83 to 156 Croatia and Albania in 162 place. (www.siepa.sr.gov.yu/srp/news/region.htm)

However, the economic system of Serbia is characterized by structural defects, which are reflected primarily in a significant gap between production and demand aggregate.

According to the projections of the International Monetary Fund, the nominal value of GDP in Serbia in 2007 will amount to 30.969 billion, or \$ 3,699 per capita. During the period 2005-2007 there is potitivan trend GDP growth (Table 1). However, the problem of sustainability of such growth.

Table 1: Gross Domestic Product in Serbia in the period 2005-2007

	2005	2006 ^{/1}	2007 ^{/2}
GDP nominal mlrd. USD	24.058	27.544	30.969

GDP per capita USD ^{/3}	2.880	3.294	3.699
GDP PPP mlrd. international dollars	44.665	47.770	51.162
GDP per capita PPP (international dollars) /3	5.348	5.713	6.112
GDP per capita nominal USD ^{/4}	3.229	3.697	4.157
GDP per capita PPP (international dollars) /3	5.995	6.412	6.867

*1 Evaluation of the IMF;

* 2 projection of the IMF;

* 3 GDP per capita is calculated based on the population of 8.3 million. residents;

* 4 authors estimate based on 7.45 million. residents;

Source: www.imf.org: International Monetary Fund, World Economic Outlook Database

According to a study on the competitiveness of the Serbian economy (Al (2003), Competitiveness of Serbia, Jefferson Institute in Belgrade), the technology index among the countries in transition Serbia is in last place, and the ongoing growth of its GDP is higher than what would result from the equipment of our economy. Consequently, the current growth is not sustainable without a significant increase in investment. Insufficient investment in new production programs and represents a limiting factor in the growth of exports, due to the lack of quality competitiveness factors (design, European mark of quality, standards, etc.). Also, the lack of investment in modern equipment and technology, leading to outdated production structures and izraubovanih capacity.

Without rapid economic development, increasing the total volume of material production and gross domestic product per capita and substantial change in the structure of their the economy can not get rid of the addiction economic relations. Both this process, on the one hand economic growth, on the other, the structural changes of the economy, current at the same time and are in mutual interdependence. No structural changes can not be achieve rapid economic growth, nor the structural changes made in countries whose economies and where there is stagnant GDP growth and national income. (Kragulj, 2009)

Conclusion

The fundamental understanding of many economic problems poynavanje assumed structure of the market economy and its functioning.

GDP included the value of the final product. With aspects of the economy as a whole, on the final product is considered that does not go into further processing as an input to produce other goods. Considered the only way goods and services are included in GDP. By eliminating multiple products allows addition medufaznih without causing the hypertrophy of the volume and value of production.

In order to correct these basic shortcomings of GDP, as usually korišenog indicators of the level of economic development of a country, introduces the approach of the net economic welfare. The main deduction applies to environmental aspects (environmental pollution, depletion of natural resources ..) The main additional items slobodng the value of time and the gray economy.

Although one of the primary goals of every country to achieve the highest possible level economic development, the importance of economic development is extremely significant for all underdeveloped country.

It should be noted that the future of the Serbian economy largely dependent on increasing the FDI foreign investment. For this reason, you should take additional measures in creating quality of the business environment in every respect to foreign investors.

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