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Measurement of flash indicator of macroeconomic inflation

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There is a long experience of monthly GDP estimates in post – USSR countries. Russia has started to estimate monthly GDP under the IMF pressure in early 1990 because it was a condition for borrowing from the Fund. Other post-USSR countries have followed Russia in these estimates using the production approach to estimate monthly GDP. Perhaps, it sounds strange, but at the same time international agencies involved in statistics criticized estimates of monthly GDP due to its low accuracy and recommended to discontinue it.

When hyperinflation was gone, Rosstat has discontinued monthly GDP estimates replacing it with estimation of so called index of basic activities which includes agriculture, mining, processing, energy, construction, trade and transportation but without other services. At the same time, Ministry of Economic Development of Russia still produce flash monthly GDP estimates using initial data provided by statistical service for the aims of forecasting and programming. Thus, currently Russia has even two flash indicators of macroeconomic growth.

Most of post-USSR countries still produce regular monthly estimates of GDP. While working for the international agencies as an expert in statistics in 2000s, the author of this discussion paper was making the standard recommendation for statistical authorities of post-Soviet countries to discontinue monthly GDP estimates and concentrate efforts on QNA with common argument of their low accuracy. Fortunately, these recommendations were ignored because of strong demand for monthly data from the local authorities.

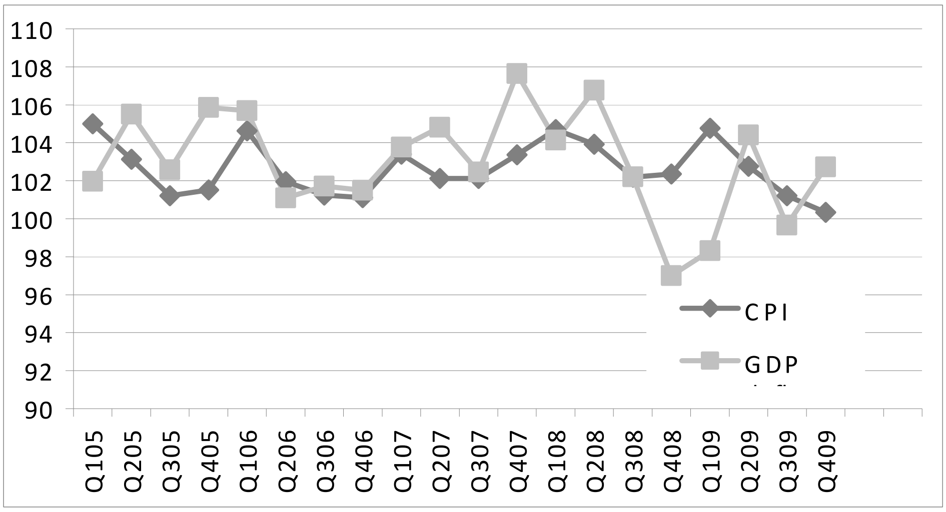
Users mostly need monthly GDP as an indicator of macroeconomic growth so the strongest demand is for data at constant prices and related indexes. Most of statistical services of post-USSR countries also produce monthly GDP data at current prices but the user's demand for these data is not very strong. But there is another reason to produce GDP at both current and constant prices – this is a possibility to compile the monthly implicit GDP deflator. Usually this possibility is ignored.

Most of economists around the world use CPI as the flash indicator of inflation. From theoretical point of view, CPI cannot be an indicator of inflation at macro level because it does not cover any prices for capital goods. CPI may be a useful tool to measure the social aspects of inflation – for instance, it could be successfully used for indexation of wages in public sector or pensions although public workers buy homes as well. At the macro level, capital formation should not be ignored. For instance, macroeconomic inflation should be taken into account by banks for purpose of interest rates determination. CPI does not include prices for construction but the common practice among banks (at least in Russia) is to use it as a benchmark for mortgage loans. So the mortgage interest rates are usually related to prices for vegetables but not to prices for homes.

Another illustration of wrong using of CPI as the indicator of inflation is the price bubbles for many durables and for real estate during the last crisis. CPI includes prices for neither durables nor real estate. Thus analysts had no chances to predict crisis using the common CPI based indexes of inflation.

GDP deflator covers all prices including deflators for fixed capital formation. There are some problems with prices for durables because holding gain should be excluded from the standard SNA indicator of changes in stocks although it is very difficult to do that in practice. But in Russian case GDP deflator is strongly related to the world commodity prices through the export prices because Russian exports includes huge volumes of oil, gas and metal.

These differences between CPI and GDP are not theoretical ones only. In practice, there are two different trends, at least during the macroeconomic instability. Picture below illustrates behavior of Russian CPI and GDP deflator during last five years.



Pic.1 Inflation in Russia measured by CPI and GDP deflator,

previous quarter = 100

During pre-crisis years GDP deflator was higher then CPI with the only exception in second quarter of 2006. The clear explanation for that is the price bubbles formation. Since the last quarter of 2007 the differences between two trends became dangerous but analysts who used CPI as a main indicator of inflation were unworried. Currently everyone knows result. In 2008 situation has changed dramatically. Bubbles burst and Russian GDP deflator has demonstrated negative tendency lowering below zero during several quarters of 2008 and 2009. At the same time, CPI was stable. Generally speaking CPI did not demonstrate any significant reaction to the crisis. That is not too strange because prices for vegetables are not very sensitive to turbulences in the world financial markets.

There could be the only strong argument to use CPI as a flash indicator of macroeconomic inflation. CPI is really flash indicator. It is estimated monthly and even weekly with the time lag in few days whereas classic GDP deflator usually is estimated quarterly with the time lag about three months after the reference quarter. With the annual or quarterly GDP estimations this argument pro is strong enough to eliminate any other reasons contra. International tradition to use CPI as the flash indicator of inflation was formed many years ago and currently even annual inflation is usually measured with CPI although there are no any reasonable arguments to do so. Perhaps, the only reason is some difficulty to explain the difference between traditional method based on CPI and theoretically more reliable GDP deflator to public.

But with monthly GDP estimates this problem is disappearing. GDP deflator could be estimated also monthly with the very small time lag. So, the GDP deflator could be used as the flash indicator of inflation at the macro level. Of course, there are some technical problems related to that. GDP should be estimated at both current and constant prices using prices of previous month as constant ones. It is not very easy but it can be done. It is necessary to create new tradition of using GDP deflator as a flash indicator of macroeconomic inflation instead of CPI. Perhaps it could help us to fight the next crisis.