

Analysis of Correlations between Economic Growth (Rate of Real GDP) and the Underground Economy

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Abstract: Analysis of performance of any economy involves the measurement and correlation of three basic elements: the rate of economic growth, the rate of inflation and unemployment rate. When the rate of growth (rate of real GDP) is high, the production of goods and services is growing and therefore increasing the number of jobs, decrease unemployment and raise living standards. If the economy is in recession phase, increasing fiscal pressure to ensure the necessary budgetary funds triggers complex economic mechanisms. Rules more strictly is that those who are not able to operate in the normal economy to slide towards the underground economy, and this not because he wants to tax evasion, but because they simply can not cope with new regulations. It is widely accepted in economic theory and practice the idea that reliability scale macroeconomic indicators of a country is affected by size of underground economy and the various tests made so far on this subject, focusing either on the social aspect or the economic or moral, or emphasizes the illegal or the edge of legality. This has led to various studies in this area do not provide comparable data or provide data to the contrary. Worldwide were put in place, however, some calculation methods provided that applied the same country and same period, the results are rarely consistent, sometimes even in fundamentally different.

Keywords: economic growth, unemployment, inflation, underground economy, fiscal pressure

Analysis of performance of any economy involves the measurement and correlation of three basic elements: the rate of economic growth, inflation and unemployment. When the rate of growth (rate of real GDP) is high, the production of goods and services is growing and therefore increasing the number of jobs, decrease unemployment and raise living standards.

The correlations between these elements has been the subject of various investigations in the field and the most important studies refer to:

➤ *Relationship: economic growth - inflation - unemployment.* The specialists argue that if the rate of growth of real GNP per capita would remain at 2% per year, then consider that per capita GDP would double every 35 years and so each generation can hope at life double than at present. If, however, GNP per capita would increase by 1% per annum will be needed 70 years for doubling the living. Should therefore take into account that small differences in the rate of economic growth over long periods can lead to large differences between the lifestyles of different successive generations.

➤ *Relationship: economic growth - unemployment or Okun's Law.* This analysis reflects the relationship between economic's growth rate and unemployment rate and is known as "Okun's Law" after the name of Arthur Okun of the Brookings Institution in the U.S.. According to this law "for each of the 2.2 percent real GDP growth, achieved in a year, the unemployment rate falls by one percent. This is a statistical and does not apply to any country, but only for U.S. and round the Okun did research. Such a statistical relationship can be deducted for each country separately, depending on the conditions of stage that through, and could be used in fundamental policy of strategic economic expansion to reduce unemployment to a convenient size.

➤ *Relationship: compensation or unemployment-inflation of Phillips curve.* Given that generally the cost of unemployment is lower than the cost of inflation, the politicians will opt for some increase in unemployment in return for some reduction in inflation. The essence of the relationship of inflation-unemployment compensation lies in that a lower unemployment can be achieved by accepting more inflation or inflation can be reduced by accepting more unemployment. This compensation between inflation and unemployment is given to the Phillips curve, which suggests that inflation can be reduced permanently by accepting the cost of higher unemployment and an empirical relationship that reflects the behavior of wage and price inflation versus unemployment, has a descending slope, giving us a high rate of unemployment is accompanied by a low rate of inflation and vice versa, there is an offsetting relationship between inflation and unemployment.

If the economy is in recession phase, increasing fiscal pressure to ensure the necessary budgetary funds triggers complex economic mechanisms. Rules more strictly is that those who are not able to operate in the normal economy to slide towards the underground, and this not because he wants to tax evasion, but because they simply can not cope with new regulations.

In the analysis of fiscal pressure, and question-generating economy, except tax rate pressure communicated officially by the Statistical Yearbook issued by INS can be calculated and recalculated tax rate pressure:

$R_{pf\ rec} = VF / GDP \times 100$ where

$R_{pf\ rec}$ = recalculated tax rate pressure,

VF = income tax

GDP_{rec} = $GDP_{official}$ - the hidden economy

It is widely accepted in economic theory and practice the idea that reliability scale macroeconomic indicators of a country is affected by size of economy. **The underground economy** of a country is composed of two broad categories of activities:

- legal transactions, which people deliberately and operators do not say to not pay taxes;
- illegal transaction (arms, ammunition, narcotics, etc.).

The underground economy is, however, and "hidden", "non", "informal", to so that quantification is in the happy expression, an inaccurate science.

To delimit the scope of the underground economy we had to found methods of control, this phenomenon should be defined and measured.

Various tests made so far on the topic underground economy, focusing on either social or the economic or moral, or emphasizes the illegal or the edge of legality. This has led to various studies in this area do not provide comparable data or provide data to the contrary.

Worldwide were put in place, however, some calculation methods provided that applied the same country and same period, the results are rarely consistent, sometimes even in fundamentally different.

Economists Xavier Grefe and Edith Archambault have differentiated methods of measuring the underground economy and the market. If the market were identified represented several methods: by measuring the wealth of national GDP through the use coefficients of production, changes in official duties and their comparison between countries. As methods of research, investigation emerges statistical sample method of control and registration of statistical monograph, and the technical ways, the gaps between spending and income, international

economic comparability, the input's physical labor census analysis volume transactions, the effects of FDI on the structure and complex modeling.

Feige analysis method or volume of transactions implies that a constant relationship between the volume of transactions and the size of GDP, based on the quantitative equation of Fisher:

$M = P \times V \times T$ where M = money, V = velocity of money circulation,

P = price, T = total transactions

By lowering the GDP of the official GDP estimate based on the volume of transactions, to obtain a value representing the size of the underground economy. Feige's method believes that in the evolution of the phenomenon is measured no shadow economy and, secondly, the $P \times T$ in the total GDP (nominal) was constant all the time if, also, would there informal economic activities.

Romanian Court of Accounts defines the economy as a heterogeneous group of illicit economic activities carried out and economic components of criminal activities. Cases objective of generating economy in our country are:

- intensity fiscal rules, and the large number of acts, frequent changes, the form of bureaucratic, legislative overlaps, etc.. The most eloquent example is the VAT tax which provides annual approx. 40% of budget revenues, has suffered over the past 15 years by implementing a number of significant changes about 30, three times adopted new acts that are ultimately adopted Tax Code, normative act of the entry into force in 2004 has undergone various changes in November.
- fiscal pressure, is a currently raised by both taxpayers and those who study the economy. In view of the analysis as relevant subjects: the real economy, and his calculation to be made after deduction of the official GDP of percentages representing the hidden economy, given that this revenue is characterized by circumvent their tax existence of a significant volume of activities exempted from certain categories of tax - a favorable tax regime applicable to free zones, duty-free design, disadvantaged areas and an impressive number of taxes, not present in the state budget but the budgets of agencies.
- corruption that found in the underground economy for the development land and has a multiplier on the level of tax fraud.
- level of poverty and unemployment.
- complex processes of capital formation.
- desire for a fast fortified specific own human nature.

The main methods for estimating the level of shadow economy are:

- direct estimation methods:
 - a) Direct supervision - analysis of data provided by economic agents operating in whole or in part, "underground". This method offers the knowledge underground economy but the structure is based on the accuracy of the data provided, which generates doubt the more so as some activities are illegal and operators are not prepared to recognize and involvement, even in conditions ensuring the anonymity.
 - b) detailed analysis of a sample of paying taxes, under threat of sanctions if they refuse to cooperate. In this way are obtained and data on small escapist working on their own and in most cases be exempt from payment of taxes due the state. This method however does not accurately since it is limited to taxable activities, without regard to such a significant part of the underground economy.

➤ indirect estimation methods:

- a) method discrepancies in expenses - those who work in the informal sector spends more than their declared income. This discrepancy, which reflects the amount of the underground economy can be put in evidence at both the individual and the national financial system.
- b) method discrepancies in the labor market - a drop gratuitous supply of labor can be considered an increase in the same measure, the underground economy. However this estimate is affected by elements interpreted. In most cases, people working in the underground economy and in the official so that this method of estimation is least used, is referred to studies contain Bruno Del Boca (Introduzione alla Econometrics) for Italy's economy or for O'Neill U.S. economy.
- c) Method discrepancies in transactions - another method of estimation was made with Edgar Feige and starts from the assumption of a constant relationship between the volume of transactions of a country and the gross national product measured officially. To estimate the level of underground economy, Feige started from a base year considered the no underground economy and considered as the volume a "normal" transactions that would remain the same for a period of several years. Obvious that these "allegations" seriously put into question the accuracy of the data obtained. In addition, it is difficult to assess volume of transactions, especially if we think the cash held.
- d) Method of discrepancies on the money market - a gap is visible on the money market and underpins the most used methods of assessing the underground economy. This starts from the premise that business transactions are conducted informally in cash to make their detection more difficult by the authorities. The underground economy is then given the amount of cash used at national level in addition to the one in official transactions. This method is considered more accurate whereas the quantity and monetary structure are generally known in detail. However, it is noted that in the economy are sometimes used by bank payments or by electronic means.

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