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Would You Like a GDP with Your Coffee?

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Abstract

The holistic economics studies the economy as an integrated, unique object with its own motivation and global resources. It is also necessary to find out from this point of view the global characteristic of this object. And this is just the analogy with the GDP, constructed upon quantities with what the holistic economics works. This characteristic describes activity of parts of the control structure of the economy aiming to the removal of the tension in controlling areas. The submitting paper forms this characteristic on the basis of a study of stock markets.

When at the end a comparison of this holistic characteristic with a standard quarterly GDP is made, a very good compliance results. It has double meaning. Firstly, a characteristic because of stemming from the development of stock markets is to the disposal on every day basis, and thus it is possible to get an analogy of the GDP on this quite different time basis. It allows an economy control in a quite different quality.

And secondly, it is a confirmation of the credibility of the holistic economics itself. Its global characteristic, resp. one of them, tightly corresponds with a global characteristic of the standard, classical macro-economics.

Keywords

GDP, holistic, stocks, structure, economics

1. Introduction

The tension is the basic notion of the holistic economics. This quantity enters into algorithms of the control on every level and in every part of the structure of the control. That is why it is necessary to introduce it in the introduction.

When two similarly specialized elements on similar positions of the structure of the object have dissimilar activity, the system evaluates it as a tension. Its size is given by the level of (dis-) similarity. Next steps of the control stem upon this tension and their goal is to remove it.

The overall task of the control is to find the most relevant tension in the system and remove it in a manner to not to augment the total amount of the level in the system, if possible.

2. The Basic Scheme of the Object—The Economy

2.1 Regeneration

The overall activity of the object aims to regenerate it, what means its transition into a state with a lower total tension. This is a state of the object where similar objects are more similarly active and it means more similarly successful. In words of sociology this is a transition into a more fair, more equitable society.

2.2 Parts of the Control

The material production based on the specialization of elements is the central activity of the object. This production is later on named as a central axis.

There are two parts of the control in relation with the central axis: control of supplies of necessary material inputs into the axis and the coordination of the activity of the axis and of related services. These controls are realized by parts of the control INP—inputs and TOT—coordination, see [1] or [2].

There is a more general part of the control besides of them and its function is to evaluate the successfulness of all elements of the object-economy and to control the reconstruction of the structure depending on its distribution. This part is named EM0.

At the end this is the part of the control EM1 what follows events on the border of the object and reconstructs it depending on changing conditions. Throughout this reconstruction the object reaches the demanded influence over the environment, too.

Depending on latest calculations it seems that there is a strong influence from EM1 on the central axis changing its activities, mainly of related services and exports, depending on the activity of the border.

3. The Top of Control

3.1 Constituents

Two global constituents stem over the mentioned structure and their task is to arch over the control. These are controlling parts **RESERVES** and **MOVEMENT**.

Their function is to solve the global distribution of resources and to control the global movement solving the global tension.

3.2 RESERVES

Function of RESERVES is double. Firstly, it is the distribution of resources between reserves and usage on a overall, object level and secondly, redistribution of resources among individual areas of the object. It is a sort of "management board" of the object.

At time of redistribution RESERVES stem from the rate of return of resources in individual areas of the object. At time of deciding reserves RESERVES evaluate the trend of successfulness of the control of the overall object by MOVEMENT. A growing successfulness and growing trend of saving on a local level leads to the growing saving into reserves and vice versa.

3.3 MOVEMENT

MOVEMENT is a culmination of standard modular structure of the control. The input part of module evaluates the tension in a controlled area, finds its maximum and on its basis starts the movement in the output part of the module—the reconstruction of the controlled area in a manner to remove the tension. The processed tension in MOVEMENT is a cumulation of local tensions from the border of the object, its material inputs and from the control of the central axis.

3.4 Resources

The activity of RESERVES represents necessary information for the activity of other areas. A higher incoming activity means higher possibilities of the activity of recipients. At the same time the majority of areas form a feed back to RESERVES, in what the information about their activity and successfulness is hand over.

The control of the object is thus realized on an informative level, though it is in its sequel connected with real changes in dispensable resources. Depending on the character of the object these are money, energy of different kind etc., obtained from out of the object.

4. GDP

4.1 Components

The regeneration of the object is influenced from three parts of the control. These are the control of inputs to the central axis—INP, the part controlling the process of the regeneration itself—TOT and the part EM0 controlling elements from the point of view of their successfulness. If, in the case of stock market, the development of the distribution of tension in these parts is observed, a new value very well reflecting another macroeconomic value—GDP—is obtained.

4.2 New Value

Let a group of firms been all oriented to a similar, ex. mining activity, is observed. More exactly, let their closing values of their stocks on the stock market are observed. From the logic of matter all changes, comparing to the previous closing values, have to been similar. If it is not the case, it goes about a tension and it is possible to measure it through the standard deviation of changes.

At the beginning of the formation of the new value there are thus to the disposal three time series of standard deviations of changes of values of stocks of firms in three groups. These are mining firms for INP, firms from the area of energy for TOT and a part of banking sector providing credits to firms for EM0.

In the case of stock markets the volatility is mainly influenced by other, non-systemic influences. The influence from the structure of the object been observed is not higher than five percent points. Nevertheless it is possible to observe the systemic events from thus small information. If the development is observed not on real values of volatility but on those been the result of filtering out of non-systemic factors by a work of the model, more exactly by its forecasts, from forecasting values mainly this system is observable.

Three new time series of standard deviation thus arise, this time throughout the forecast of model. And after on, a unique mean standard deviation on the basis of them. At the end a time series of differences of values is formed from it, when the value of the mean standard deviation at a given time is compared with the value a month ago.

The correlation between GDP and thus formed value is high—at the time of writing this article the coefficient of correlation is 0.93—see Figure 1 and this value is still improved.

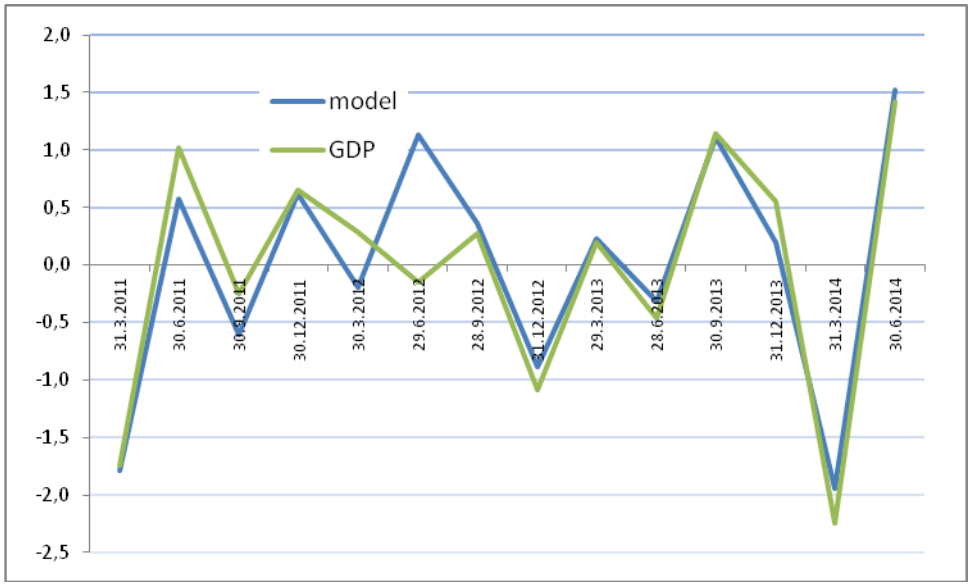

Figure 1. Comparison of Values of Systemic Value Formed by the Model and of GDP of the U.S.A., after Normalization

Source of data: Eurostat.

Gross domestic product at market prices. Chain linked volumes, percentage change compared to corresponding period of the previous year. Seasonally adjusted and adjusted by working days.

5. Conclusion

GDP is a basic global macroeconomic characteristic, but it has a fundamental shortage and this is its availability maximally in a quarterly layout. On the other side there are stock markets describing the successfulness, means the activity of firms in an on-line layout. This description throughout stocks is formed from main part by others than purely economic factors, not to speaking about factors macroeconomic, but if it is possible to filter-out them, it is a strong instrument describing the economy.

The holistic economics, means the economics understanding the economy as a whole object, is just a filtering-out instrument. It is possible with help of this instrument to find out events connected with the object, to describe them and thus to describe also its activity from the point of view used by standard, classic macroeconomics—GDP.

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