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MODELLING OF ECONOMIC DEVELOPMENT OF UKRAINE IN THE CONDITIONS OF UNCERTAINTY

The concept of economic development is one of the most important in macroeconomic science and shows the moving of the whole economy. It is considered within the concept of economic growth, due to the changes of GDP per capita. These two concepts are interrelated, as economic growth leads to the qualitative changes in the whole economy.

Looking at the current state of Ukraine's economy, it should be noted that there is a sharp drop in the volumes of export and import for last years and there is the reduction of foreign investment. Despite the high rates of involvement of Ukraine in international trade our country does not meet modern trends of global development. The openness of the economy of Ukraine is one-sided with a high destiny of exports and imports in the GDP but with the other low indicators. That is why to simplify a constructing of economic and mathematical model there will not be taken into account foreign investment, export and import.

Looking at features of the aggregate solvent demand we can see that the largest share of it is the final consumer spending of households. Its volume corresponds to the structure of the gross domestic product in costs. The fund of consumption is considered as disposable income of the population of Ukraine. Looking at the statistics, we can conclude that the aggregate solvent demand is greater than the fund of consumption. This suggests unsaturation of market, so there is the sense to develop the domestic market of Ukraine.

To build an economic and mathematical model we use the indicators of price index, consumer demand and consumption fund changes. We introduce two criteria, one of which reflects the desire of the country to reduce the difference between supply and demand at the market, and the other – the desire of producer to maximize profit. Control parameters are the deposit rate, the share of household income in national income and the rate of consumption. There is a need to bring these criteria to one global criterion and choose optimal values be the method of Pareto.

REFERENCES:

1. Plan priorytetnykh diy Uryadu na 2016 rik. Zatverdzheno rozporyadzhennyam Kabinetu Ministriv Ukrayiny vid 27 travnya 2016 r. No 418-r

2. V.N. Belentsov Formyrovanye sovokupnoho sprosa v Ukrayne v uslovyyakh transformatsyy sobstvennosty. Hosudarstvennыy unyversytet upravlenyya, Donetsk. ISSN 1562-109X

3. Ekonomichna teoriya: Politekonomiya: Pidruchnyk / za red. V.D. Bazylevycha; Kyyiv. nats. un-t im. T. Shevchenka. – 9-te vyd., dopovn. – K.: Znan nya, 2014. – 710 s.

4. Natsional'na ekonomika: Navch. posib. / A.F. Mel'nyk, A.Yu. Vasina, T.L. Zhelyuk, T.M. Popovych; za red. A.F. Mel'nyk. – K.: Znannya, 2011. – 463 s.

5. M. V. Mykhalevych Rabotы akademyka V. S. Mykhalevycha po yssledovanyyu perekhodnoy эkonomyky. Kybernetyka y systemnыy analyz. 2005. No 2

6. Herezhenko I.M., Tomchuk O.F. Vinnyts'kyy natsional'nyy ahrarnyy universytet, Ukrayina [Elektronnyy resurs]: Fnalitychna otsinka efektyvnosti vykorystannya osnovnykh zasobiv – Rezhym dostupu: http://www.rusnauka.com/14_NPRT_2011/Economics/6_86089. doc. htm

7. Hroshi ta kredyt [Elektronnyy resurs]: 2. Osnovni makroekonomichni pokaznyky. – Rezhym dostupu: http://www.megos.org.ua/grochi%20ta%20 kredyt.7.2.html

8. M. I. Nebava Teoriya makroekonomiky [Elektronnyy resurs]: 12.1 Ekonomichne zrostannya ta ekonomichnyy rozvytok. Dzherela ta faktory ekonomichnoho zrostannya – Rezhym dostupu: http://posibnyky.vntu.edu. ua/makro_ek/12.htm

9. Onlayn biblioteka ekonomista [Elektronnyy resurs]: 6.1.4. Model' «tovar – rynok» – Rezhym dostupu: http://library.if.ua/book/44/3025.html