

MACROECONOMIC PROPORTIONS IN THE VISEGRAD COUNTRIES AND UKRAINE: COMPARATIVE ANALYSIS

The article is devoted to the research of macro-economic proportions in the Visegrad countries and Ukraine. There are two macroeconomic models: production oriented and consumption oriented. The advantages and disadvantages of each this model were identified. Typical representatives of these models were respectively the Czech and Polish economy. Macroeconomic models of Hungary and Slovakia may be classified as mixed. Ukrainian macroeconomic model can be defined as an eclectic, which has absorbed the mainly negative aspects of two models. Based on this analysis the strategic orientation of macro-economic reforms in Ukraine was defined.

Key words: *Visegrad Group, macro-economic proportions, production oriented and consumption oriented macroeconomic models, foreign direct investment, and household consumption expenditure.*

Signing “Association agreement between the European Union and its member states, of the one part, and Ukraine, of the other part” [1], where Article 1 declaims creation of Association between Ukraine and European Union and its member states, has confirmed the strategy of the European oriented choice for Ukraine and has practically defined the direction of its economic transformations. However, up to now we don't have clear belief about condition of the national economy, to which we must strive for approximation to the so called “European standard”. That is why we can see increased interest both of society as a whole and economic science in the experience of other European post-social countries, which have passed the long starting-up stage to entering to the EU and have been its full members for 10 years.

We know that the European Union has around fifteen agreements on association with countries, which probably will never become (but in some cases they do not want to be) members of the EU: Albania (2009), Algiers (2002), Egypt (2004), Jordan (2002), Chile (2005), South Korea (2011) and others [2]. That is why we consider Ukraine entering the EU as landmark rather than a realistic purpose for the nearest years. However, exactly these landmarks can help to define the concrete macroeconomic purposes, whose achievement must be promoted by the policy of a state, as well as macroeconomic threats, which the valid strategy must minimize.

From this point of view the history and modern condition of the Visegrad members (the Czech Republic, Hungary, Poland and Slovakia) can be quite valuable experience for development macroeconomic of landmarks for the strategies of Ukraine. The choice of these countries has been conditioned by some reasons. First of all, they are next-door neighbours of Ukraine, who are members of the EU and three from these countries (Poland, Slovakia, and Hungary) have a common border with Ukraine. Secondly, in 1997, when the negotiations about entry of ten new members into the EU (including participants of the V4) began, their economic condition in large part reminded the modern condition of the Ukrainian economy. So, for instance, ratio of GDP per capita in these countries to the same factor in Germany in 1997 was: in the Czech Republic – 22%, in Hungary – 16, in Poland – 15, and in Slovakia – 19% [3]. In 2013 GDP per capita in Ukraine was about 19% from this factor in Germany [4]. Thirdly, on the way of reforming the economy of Ukraine must solve practically the same

problems, which were formulated by participants of this group in the Visegrad declaration in 1991: reconstruction of independence, democracies and liberties; eliminating the manifestations of the totalitarian system; the building of parliamentary democracy, modern legal state, respect of the rights and liberties of a person; creation of modern free market economies; full involvement in the European political and economic system, as well as in the safety system and legislation [5].

There are a lot of interesting studies, devoted to analysis of the development of the countries in Eastern and Central Europe in the last years. Special attention was paid to the economic crisis in this region [6–8]. There are also works, which deal with participants of the Visegrad group in particular [9]. Together with that, there is lack of collation of the macroeconomic situation in these countries with similar factors in Ukraine. It can be very useful for determination of the strategies of the economic transformations in our country.

The purpose of this article is collation of some macroeconomic proportions, established in the countries of the V4, with the condition of the Ukrainian economy for determination of the strategic macroeconomic landmarks of the transformations in Ukraine.

In 1991 (the year of the Visegrad group creation and year, when Ukraine declared independence) the level of development of our countries was also wholly comparable. GDP per capita (official exchange rate) was \$ 2867 in the Czech Republic, in Hungary – 3322, in Poland – 2193, in Slovakia – 2680, and in Ukraine – \$1490 [3]. However, the situation has fundamentally changed for 23 years (Table 1).

Table 1

GDP per capita in 2013*

Indexes	Czech Republic	Hungary	Poland	Slovakia	Ukraine
Population (thsd. persons)	10 627	9 919	38 346	5 443	44 291
GDP (\$ bn., official exchange rate)	194.8	130.6	513.9	99.6	175.5
GDP per capita (\$, official exchange rate)	18 331	13 167	13 402	18 299	3 962
GDP (\$ bn., PPP)	285.6	196.6	814.0	133.4	337.4
GDP per capita (\$, PPP)	26 300	19 800	21 000	24 700	7 400
Currency index	1,46	1.50	1.58	1.33	1.92

*Source: The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/up.html>.

Ukraine is the largest country on the number of the population in this group (32 positions in the world). However, on the GDP factor, calculated in dollar on the official exchange rate, it yields to Poland, which is close to it on the number of the population, and the Czech Republic, which is 4 times smaller than Ukraine. Accordingly GDP per capita in Ukraine turns out to be in 4.6 times less than in the Czech Republic and Slovakia and in 3.3 times less than in Poland and Hungary.

At the same time factors, founded on calculation made in dollar in according with its official exchange rate, are used quite seldom in international collation. Even the World Bank, which brings such factors, does not use them for determination of the country's place in the world. The current (market) exchange rate reflects the correlation between the supply and demand and foreign currency on a national market. That is why using these indicators for comparison can seriously distort the real correlation of macroeconomic factors in different countries. We can have more exact information using purchasing power parity (PPP), which shows the real correlation of an average level of prices in various countries.

For determination of the dollar (or the other currency) overestimation (underestimation) degree we have offered to use the currency index as a ratio of the official exchange rate to purchasing power parity [10]. As it can be seen from Table 2.1, in Ukraine dollar is over-

estimated practically twice, whereas in the other countries it is approximately half as much again. Slovakia is an exception, where dollar is overestimated far less.

Though based on the factor of GDP per capita, calculated on PPP, backlog of Ukraine from members of the V4 is several times less, really it is from 2.7 to 3.5 times less. The fact that other countries, which signed Agreement on associations with the EU simultaneously with Ukraine, have this factor less than Ukraine (Georgia – 6 100, Moldova – \$3 800), can give some sedation.

The low level of GDP per capita in large part defines the structure of its consumption (Table 2).

Table 2

GDP – consumption, by end use in 2013*

Factors	Czech Republic	Hungary	Poland	Slovakia	Ukraine
GDP structure (%):					
– household consumption	45.1	55.5	61.5	56.7	72.0
– government consumption	18.3	20.4	17.6	18.1	18.6
– investment in fixed capital	27.0	16.4	18.3	20.1	17.8
– investment in inventories	0.1	-0.7	0.6	0	-1.1
– exports of goods and services	81.1	97.2	46.7	93.0	49.6
– imports of goods and services	-71.5	-88/8	-44.7	-88.4	-56.9
– net export	9.6	8.4	2.0	4.6	-7.3

*Source: The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/up.html>.

The earlier studies made by us before have shown existence of inverse dependency between the level of the development of the country and part of household consumption in GDP [11]. Such a dependency can be seen in Table 2. The aspiration to support a more or less acceptable level of the consumption under limited possibility lies in its base. For instance, GDP per capita in Ukraine is 4.6 times less than this factor in the Czech Republic, but taking into account higher part of the consumer expenses in Ukraine its backlog in consumption forms only 2.2 times.

We can say about existence of two different macroeconomic models amongst the Visegrad countries: production oriented and consumption oriented (Table 3).

Table 3

Production oriented and consumption oriented models

Indexes	Production oriented model	Consumption oriented model
Household consumption	Share in GDP is less than half	Share in GDP is more than 60%
Investment in fixed capital	Share in GDP is more than 25%	Share in GDP is less than 20%
Export share in GDP	Is about 80–90%	Is about 50%
Net export	Share in GDP is +5-10%	Share in GDP is ± 3%

Every model has its own advantages and disadvantages. The most important advantage of the production oriented model is speedup of the economic development. The investment in the fixed capital allows not only its increase, but also the modernization of already existing, supporting technical condition of the national economy on the modern level. Domestic investment is a good motive for attraction of foreign investment, which, as a rule, is increased at quick rates. As a result of these processes, manufacturing products are quite competitive on the world market. The country has a possibility to increase the export and import. It tries to have positive value of the net export. Currency excess allows creating rather significant gold

and foreign currency reserves, which are a base for ensuring the stability of national currency and relative stability of the prices.

Mean while this model has some disadvantages. First of all, it cannot achieve a main long-run objective of every production: increasing of meeting requirements. The low share of the household consumption in GDP can lead to the situation when a country has quite a high production factor, but the personal consumption level is lower than in a less developed country. The significant value of the net export indicates that essential part of manufacturing product is consumed abroad and is not directed on meeting requirements of domestic consumer. High factors of the external trade turnover do country dependant on condition of the world market and consequently any fluctuations in the world economy are greatly reflected on dynamic of the national factors.

The macroeconomic model oriented on consumption also has its advantages and disadvantages. First of all, it solves a problem of growing of meeting degree of requirements in to a greater extent, because in conditions of comparatively limited resource it provides the sufficient level of consumption. Secondly, being oriented on the domestic market and not having overstating factors of the foreign trade turnover, such an economy depends on foreign markets in a less degree and allows less painfully outlive change of their conjuncture. On the other hand, the total rates of the economic growth in the country with thr consumer oriented model are several below. These countries become less attractive for foreign investor. They also have a limited possibility take the advantage of the international division of labour.

Amongst the Vissegrad countries the economies of the Czech Republic and Poland are the brightest representatives of these two models.

Practically during all the 2000s the Czech economy was oriented on speedup of the economic growth. For the sake of this consumer expenses were limited and investment was increased. Investment varied at about 30% in GDP, having reached a peak in 2006 – 36.1% [12]. This in a large part defined quite high rates of the economic growth in this country: they were the highest amongst the Visegrad countries. The production nature of the model determines the employment structure. The Czech Republic has one of the highest factors of the share of population employed in industry which accounts for 37.4% (Table 4).

Table 4

Indicators of the situation in the economy of the Visegrad countries and Ukraine in 2013*

Indicators	Czech Republic	Hungary	Poland	Slovakia	Ukraine
Labor force – by occupation (%)					
– agriculture	2.6	7.1	12.9	3.5	5.6
– industry	37.4	29.7	30.1	27.1	26.0
– services	60.0	63.2	57.0	69.4	68.4
Household consumption per capita (\$, PPP)	11 860	10 990	12 915	14 000	5 330
Reserves of foreign exchange and gold (\$, bn.)	56.2	38.4	107.8	2.2	21.9
– per capita (\$)	5 300	3 880	2 815	400	494
– share in GDP (%)	19.7	19.5	13.2	1.7	6.4
Foreign direct investment (\$, bn.)	144.2	112.0	248.2	63.9	61.5
– per capita (\$)	13 600	11 310	6 475	11 830	1 375
Debt – external (\$, bn.)	102.1	170.3	365.2	68.4	138.3
– per capita (\$)	9 620	17 200	9 530	12 670	3 120
– share in GDP (%)	35.7	86.6	45.2	51.0	41.0

*Source: The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/up.html>.

Amongst the investigated countries the Czech Republic also has the highest factors of foreign direct investment and gold and foreign currency reserves per capita. It shows that the country has stable enough financial position. The external debt also is on the safe level: it is half of the gold and foreign currency reserves and forms 35.7% in GDP.

At the same time, having the highest factor of GDP per capita, the Czech Republic yields to Poland and Slovakia in household consumption per capita. Besides, it is easy to notice that fluctuations of the economic growth rate of the Czech economy in large part is differed the similar dynamic of the factor in the countries of the European Union as a whole. Examination of the tight relationship of these factors by means the correlation parameter calculation, using data in Table 5, confirms its essential value (0.74).

Table 5

GDP – real growth rate (in % to previous year)*

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013
Czech Republic	10.7	6.9	6.2	6.3	-2.9	5.0	0.5	-1.0	0.7
Hungary	4.3	4.0	0.5	0.9	-6.6	0.8	1.8	-1.5	1.5
Poland	3.5	6.2	7.2	3.9	2.6	3.7	4.8	1.8	1.7
Slovakia	6.5	8.3	10.7	5.4	-5.3	4.8	2.7	1.6	1.4
EU (28)	2.0	3.4	3.1	0.5	-4.4	2.1	1.7	-0.4	0.0

*Source: The World Bank data set: <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

In principle other macroeconomic picture is seen in Poland. Its consumption oriented nature confirms rather share in GDP of the household consumption – 61.5%. This is the highest factor amongst the Visegrad Four. For a long period domestic demand (sum of consumer spending and investment) has exceeded the gross domestic product, but difference was covered at the expense of negative balance of trade (the net export had negative value). And only over the last years we can see small excess of exports over imports. Neither export, nor import reached even 50% in GDP. It makes the Polish economy quite independent from world fluctuations. Poland is the unique country in the Visegrad group, which has not allowed the reduction of GDP for the period from 2002 to 2013, even in the period of the world financial and economic crisis (the correlation parameter of GDP growth rate in Poland and in the European Union is 0.64, that is not essential enough). The stability of the economic situation makes the economy of Poland rather attractive for foreign investors. Based on the absolute factor it occupies the first position amongst the Visegrad countries. However, FDI per capita in Poland is less than in the other countries.

The economies of Hungary and Slovakia present the mixed variant of macroeconomic models. On the one hand, share of the consumer expenses in GDP in these countries is high enough to limit their possibility to undertake investment activity at the expense of the internal sources. So stress is made on attraction of foreign funds through direct investments and external borrowing. The foreign direct investment per capita in these countries corresponds to the rate of the Czech Republic approximately. But external debt today presents the real threat to stability, for Hungary in particular, where this factor has reached 86% in GDP. The serious problems can arise in Slovakia because it has very small gold and foreign currency reserves. Though entry of this country into Euro-zone has removed one of the problems, which the gold and foreign currency reserves execute traditionally (guarantee of national currency stability), but other function they has to execute. On the other hand, both countries have integrated in the world market powerfully: share of the export in GDP is more than 50%. Economic track record of these countries completely repeats the dynamic of the EU economy as a whole: correlation parameters of GDP growth rate in Hungary and Slovakia are accordingly 0.82 and 0.94.

Can we define the macroeconomic model in Ukraine according to previous results of analysis? From our point of view, it is eclectic, including most of the disadvantages of the two models. First of all, share of household consumption in GDP is increased supernormal. It does not give a possibility to form the sufficient internal sources for investment. As a result, in fact, we can observe the process of deindustrialization of the Ukrainian economy that is reflected in overweening share in labour force which is employed the service industry – 68.4%. As a rule, such a level of this factor is characteristic of countries with GDP per capita which is 3 times as much as Ukrainian. Secondly, significant internal demand, created by great consumer spending, is not covered at the expense of domestic production increase, but at the expense of overtaking growth of imports. It brings about negative value of the net export factor. It is one of the reasons of the reduction of gold and foreign currency reserves. In Ukraine this factor per capita is 11 times less than in the Czech Republic! Thirdly, Ukraine is not attractive for foreign investors. Even that facility, which has come to Ukraine and is classified as foreign investments, sometimes is foreign investment in fact (it may be the money of domestic oligarch, called on through of offshore-zone, the facilities received from of sale state enterprises to foreign men and used on payment of the social obligations of the state etc.). But even taking them into account the foreign direct investment per capita in Ukraine is 5 times less than in Poland and 10 times less than in the Czech Republic.

The accumulated macroeconomic problems in Ukraine manifested themselves in 2014. Escalated political instability and great expenditures on the defence of the country have brought about collapse of national currency, outflow of foreign investment, speedup of inflation, fall in the volume of production and consumption; gold and foreign currency reserves and foreign debt have reached critical value. In these conditions it is very important to see the landmarks for development of macroeconomic strategies. Our examination of the macroeconomic conditions in the Visegrad countries allows offering the following macroeconomic problems as landmarks:

– **take a consumption oriented model as a base.** The production oriented model will immediately cause zero tolerance by the society and can provoke the social conflicts. But it is necessary to decrease the share of the consumer spending in GDP. It is necessary to cultivate a social opinion that we have to live using only those facilities, which our country has;

– **limit uncritical import in the country, substituting it by domestic production.** This will allow, on the one hand, perfect trade and payment balance, forming gold and foreign currency reserves, and on other hand, it will create the additional jobs in the country and eliminate the problem of unemployment;

– **orientation of both domestic and foreign investment on finding solutions to the reindustrialization problems.** It is a very difficult question, but solving the macroeconomic problems, problems of saturation of the domestic market, reduction of unemployment and increase in the export only at the expense of the service industry is impossible. Our country needs real investments in agriculture and industry for passing a pre-industrial stage of the development and preparing the premises for the following transition to the post-industrial society.

Certainly, reaching these landmarks in a short period of time is impossible. But it is necessary to take need the first step which would confirm that direction has been chosen faithfully.

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Стаття посвячена дослідженню макроекономічних пропорцій в країнах Вишеградської групи та України. Виділені дві макроекономічні моделі: виробнично-орієнтована та потребителі-орієнтована. Определены их преимущества и не-

достатки. Типичними представителями цих моделей являються, відповідно, чеська і польська економіка. Макро економічні моделі Венгрії і Словаччини можуть бути класифіковані як змішані. Українську макро економічну модель можна визначити як еkleктичну, яка вбрала в себе головним чином негативні сторони двох моделей. На основі проведеного аналізу визначені стратегічні орієнтири макро економічних перетворень в Україні.

Ключеві слова: *Вишеградська група, макро економічні пропорції, виробничо-орієнтовані та споживацько-орієнтовані макро економічні моделі, прямі іноземні інвестиції, споживацькі витрати домогосподарств.*

Статтю присвячено дослідженню макро економічних пропорцій у країнах Вишеградської групи та України. Виділено дві макро економічні моделі: виробничо-орієнтовану та споживацько-орієнтовану. Визначено їх переваги та недоліки. Типовими представниками цих моделей є, відповідно, чеська та польська економіки. Макро економічні моделі Угорщини та Словаччини можна класифікувати як змішані. Українську модель можна визначити як еkleктичну, що вбрала в себе головним чином негативні сторони двох моделей. На підставі проведеного аналізу визначено стратегічні орієнтири макро економічних перетворень в Україні.

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