

- Environment and Loading, 23-25 September 2013, pp 1888-1898, Nanjing, China
- Bonavetti, V., Donza, H., Menendez, G., Cabrera, O., and Irassar, E.F. (2003). "Limestone filler cement in low w/c concrete: a rational use of energy." Cement and Concrete Research, Vol. 33, pp. 865-71
- Aukor, F.J. and Al-Qinna, M.I. (2008). "Marble and Environmental Constraints: Case study from Zarga 3. Governorate, Jordan." Jordan Journal of Earth and Environmental Sciences, Vol. 1, pp. 11-21
- Binici, H., Kaplan, H., and Yilmaz, S. (2007). "Influence of marble and limestone dusts as additives on some 4. mechanical properties of concrete." Scientific Research and Essay, Vol. 2, pp. 372-379
- Corinaldesi, V., Moriconi, G., and Naik, T.R. (2010). "Characterization of Marble Powder for its use in Mortar and 5. Concrete." Construction and Building Materials, Vol. 24, pp. 113-117
- 6 Demirel, B. (2010). "The effect of the using waste marble dust as fine sand on the mechanical properties of the concrete." International Journal of the Physical Sciences, Vol. 5, No. 9, pp. 1372-1380
- Kibriya, T. and Speare, P.R.S., The use of crushed brick coarse aggregates in concrete, Concrete in the Service of 7. Mankind - Concrete for Environment Enhancement and Protection by Dhir, Ravindra K. & Dyer Thomas D. (Eds), E & FN SPON, London, ISBN: 041921450X, 1996.
- Kibriya. T, Blended Ferro-cement A High Performance Smart Material for Strengthening of Old Structures, Concrete: Construction's Sustainable Option, 7th International Congress, 6-8 September, 2008, Dundee, Scotland,
- Kibriya. T., Durability of concrete with crushed brick coarse aggregates, 8th Islamic Countries Conference on Statistical Sciences, December 21-24, 2002, University of Bahrain, Bahrain, 2002.
- 10. Dr. Tahir Kibriya, Investigations on Frost Resistance of Concrete with Crushed Brick Coarse Aggregates, 41st Annual Convention, IEP, 26 - 28 May, 2001, Karachi, Institution of Engineers, Pakistan, 2001.
- 11. Kibriya. T., Investigations on high strength concrete with crushed brick coarse aggregates, Science Technology and Development, Vol. 22, July - September 2003, pp 1 - 4, ISSN 0254 - 6418.
- 12. ACI 233R-03, Slag Cement in Concrete and Mortar, American Concrete Institute
- 13. Teychenne, D.C, Franklin, R.E. and Erntroy, H.C., 1988, Design of normal concrete mixes, (Replacement to Road Note.4), Department of Environment - Transport and Road Research Laboratory, London.
- Nawy, Edward. G., 1996, Fundamentals of High Strength High Performance Concrete, Longman.
- 15. ACI Compilation # 32, High Performance Concrete.

18



## FACTORS CURBING THE ECONOMIC CONVERGENCE OF UKRAINE IN THE EUROPEAN REGION

<sup>1</sup>Ptashchenko Liana, <sup>2</sup>Isayev Namik, <sup>3</sup>Melnychenko Natalya

<sup>1</sup>Doctor of Economic Sciences, Professor

<sup>2</sup>Doctor of Philosophy in Business Administration, RIDCAG

<sup>3</sup>Poltava National Technical Yuri Kondratyuk University, student

## **ABSTRACT**

The problems of economic convergence of Ukraine to the European Economic Area were considered. The authors' opinion was expressed that the negative impact on the state of the national economy comes not so much economic or political factors, but more – latent factors that are destructive and deepen economic and social shocks in Ukrainian society. Author's attention was focused on two issues: politicized oligarchy and passive behavior of participants in economic relations. Measures for solving these and other problems that constrain Ukraine's real economic convergence in the European Region were identified in the article.

**Keywords:** convergence, public debt, the shadow economy, government regulation, structural changes, competitiveness.

Introduction. Formed in Ukraine's economy the market type is the result of faulty models, transformation of ownership by privatization, business relations and Government, Despite the fact that the most promising and strategic businesses and industries have moved into private hands and demonopolised almost all commodity markets, it did not become a factor of economic success - conditions for economic competition are not created, and the market mechanisms or not operating or non-inhibited monopoly entities oligarchic grouping. This, in turn, not contributes to a stable and progressive movement of national economy of Ukraine in the direction of qualitative structural changes. The extremely slow development of the real economy, social infrastructure of the national economy of Ukraine, which hinders the process of economic convergence with the European Union, i.e. the reduction of the gap in terms of economic development, and thus - the acceptance of the EU as an equal partner and as an active subject, not as an object of economic relations. The classic is the idea that the formation of an efficient structure of the national economic system and its convergence with developed countries depends on the alignment of interests on an international level with other countries, different according to the degree of development and integration into the global economic system. That is, it is refers to the multi-vektor integration, which involves not only the emergence of new forms of organization of the market, customs and monetary space, but convergence and mutual adaptation of national economies [1]. However, the economic situation in Ukraine today, indicates that such integration is not enough. Government tries to reassure their citizens about the fact that doing everything possible for the accession to the European Union, but the actual shift is almost absent. In this context it is urgent study of factors which hinder the economic convergence of Ukraine in the European region.

The latest sources of research and publications review. Problems of convergence of EU economies are seen in the works of Z. Darvasa [2], E. Zervoyani [3], B. Makkoviaka [4], M. Stockera [5], J. Fagoyette [6] and others. Their thoughts about the Maastricht Treaty and problems of his points on economic convergence expressed by M. Baun [7], E. Best [8], F. Vanhonaker [9], F. Larsen [10].

The issue of convergence and mutual adaptation of national economic systems was given considerable attention by such scientists as V. Bakingem [11], O.V. Bulatova [12], E.Y. Vinokurov [13], K. G. Grigorian [14], N. Landret, D.S. Kolander [15], M.M. Kornev [16], M. Ma rini [17], A.A. Sishchuk [18], who are considering the problem of convergence with various aspects. J. Galbraith considers the technological version of convergence, i.e. in his theory of the problem of convergence of the two systems, he approached in terms of sizes of production, it's technical and organisational side. The inevitability of technological convergence scholar justifies the fact that developed countries are inherent in large scale production, regardless of their political system, which need «about similar systems of planning and organization» [19]. V. Bakingem sees the convergence of single overall economic system [11].

With the formation of the neoclassical theory of R. M. Salou and its subsequent modification of the notion of convergence in economic research takes on a more narrow meaning, as scientists and economists deepened in problems of matching the levels of production of the poor and rich countries.

Given the fact that the regional integration processes between the individual countries of the world are characterized by varying degrees of depth and speed, a comprehensive analysis of these processes is a priority phenomenon that



requires study and description. In the scientific economic literature there is no unified approach to the definition of key indicators, indices and measurement criteria of economic convergence [1]. Nearly unexplored remain problems of economic convergence of Ukraine with the European economic area.

**Main body.** To ensure the stability of the eurozone, were laid down a series of conditions for a legal and institutional nature, as a priority prerequisite for EU accession was the performance of the countries of the stability requirements, stipulated by Maastricht agreement. These requirements apply to such an important component, as economic convergence.

The Maastricht agreement defines the following criteria of economic convergence:

- achieving the appropriate level of price stability. The inflation rate in the country a potential member of the European Union for the year preceding the year of inspection, is not more than 1.5% exceed the average inflation in the three countries of the European Union with the lowest indicators of inflation;
- ensure proper condition of financial performance in the long term period in order to prevent excessive budget deficits and excessive public indebtedness. The country's budget deficit should not be more than 3% of GDP (referentnand, that is, the maximum permissible value). In according with article 104c of Maastricht Agreement requirement may be considered executed when the level of the deficit exceeds the reference value, but for the last time relentlessly closer to it and when verifying almost reached the mark of 3%;
- avoiding excessive public debt and, that is, the ratio of the actual government debt to GDP should not exceed the reference value of debt (60% of GDP). This condition, according to the Maastricht agreement, can also be considered executed when debt levels exceed the reference value, but over recent years relentlessly continually approaching to it and the time the test almost reached the Mark of 60%;
   etc. [20].

Can today's professionals and analysts say that at least one of the above indicators Ukraine has reached convergence, or comes close to it? Despite the fact that the Government with the «pride» declares economic growth in 2016, and predicts a further revival of the national economy, a situation that has prevailing today into real sector shows otherwise.

We share the opinion of T. Kovalchuk that one of the important and effective factors that led to the current problems is the psychology of temporality, which is governed by big business, and virtually all Governments. The history of the Ukrainian Government, and, consequently, the power rotation is the confirmation of this [21]. Firmly realizing its time, every syllable of the Ukraine Government ask for loans to international organizations, willingly participates in debt, knowing that it's return will be trying to resolve the following command.

We are not against such a policy of borrowing only if funds aimed at investment projects, in capital investments, the development of industry, agriculture, social sphere. However, almost all the funds of the foreign currency loans are used for current needs and replenishment of reserves of the NBU.

**Purpose of the article**. Based on the foregoing, the terms of management put forward the objective necessity of the study of the factors that hinder the economic convergence of Ukraine with the standards of the leading developed countries, particularly in Europe.

Retrospective analysis of economic literature revealed the lack of a unified approach to the theoretical substantiation of the essence of the concept of «convergence». In economic theory for the first time this concept appeared in the 1940s-1950s, and was borrowed from natural history, theory of systems where, due to the emergence of a relatively distant groups of organisms are common features in building and functions as a result of vital activity of these organisms in similar environmental conditions. The most common is considered there, which used the word «approach», «similarity» or «becoming like» that used during the analysis of the socio-economic area countries [16].

Assessing the degree of approximation of the economies, using the concept of real and nominal convergence. The first is determined by score of the real GDP per capita, the second is a set of indicators Maastricht agreement in which we have been described above.

Despite the fact that some researchers do not consider these indicators as universal and see in them a number of shortcomings, we can perform a comparative analysis of the indicators of Ukraine and determine whether there are signs of economic convergence of Ukraine and the European Union.

20



Author's hypothesis is that the negative impact on the state of the national economy have not so much economic or political factors, but latent character factors. To confirm the hypothesis will use dynamic methods and comparative analysis, Pareto, expert assessments.

The results of the study. Known the fact that the material basis of the circularity is physical upgrades core capital, although the immediate impetus for the crisis can be a variety of reasons, and above all, monetary and credit turmoil. Although these shocks also is a consequence, not the cause of the prolonged crisis in the economy. A striking proof of this author's position is the economic situation in Ukraine, a strong impact on the status of any putting internal risks associated mainly with military actions in Donbas. This leads to the need of increasing cost of funding for law enforcement agencies, the restoration of damaged infrastructure, the housing sector, more. But there are also other factors that are, rather, latent in nature, and so – are more threats for Ukrainian society and hinder the economic convergence with developed countries, because they are difficult to detect and evaluate.

Yes, huge rate increases debt dependence, while the volumes of industrial production are reduced and almost missing the growth of GDP. In support of this we give the following statistics. The total amount of State and guaranteed debt over the last three years has 3,5 times (from 549.46 UAH billion in 2013, up to 1941,36 billion UAH (\$ 71.76 billion.) in the 2017 year), including State external debt during this period increased in 4.7 times and amounted to 977,64 billion UAH (\$ 36.48 billion.) [21].

But, same public debt growth in itself does not cause apprehensiveness if the economy works, develops its real sector and is GDP. The results of the comparative analysis of public debt and GDP indicate, unfortunately, that the level of debt security almost twice exceeded the legal limit of the indicator «national debt/GDP», which not would exceed the 60% because the size of real GDP in 2016 amounted to 2034,43 billion UAH [22] (\$ 75,35 billion) and, the ratio of the «national debt/GDP», respectively – 95,4 %.

It should be noted the special «objectivity» of the Ukrainian statistics. Until 2015, real GDP was equal to the price in 2010, and the results of the 2015 this figure was equal to the price of 2014, in 2016 – the prices of 2015. Instead declared by the World Bank falling in GDP of Ukraine in 2015 at 10% (according to the CIA – 11%) for statistics of Ukraine this figure has increased by almost 35%, and in 2016 – 1%! And while statistics (as a rule) do not correspond to the real numbers, but on their basis one could argue that when the adjustment of the ratio of national debt of Ukraine's real GDP exceeds the recommended 60% in 1,6 times. The comments here are unnecessary. The main creditor of Ukraine – IMF predicted increase Ukraine's GDP in 2016 to 2% with inflation at 12%. And although this prediction (for statistics!) almost fulfillment, you should ask yourself is it good or bad for the national economy, and which levers are able to positively affect on the way out of the protracted crisis, and on the formation of fundamentally new national paradigm of economic relations in the Ukrainian society? Analysis showed that the most critical to the national economy of Ukraine are the following factors:

- the growth of the public debt and of exceeding his pace over the pace of GDP;
- the excess of the share of foreign loans to cover budget deficit in 7 times;
- a reduction of 11% of GDP (in the ranking, compiled by the CIA, Ukraine on the growth of GDP was ranked in 2015: 222-nd position of 225 countries [23];
- significant amounts of shadow economy, the extent of which are not decreasing (table 1).

Table 1 The scale of the shadow economy in Ukraine in% of GDP

	Period										
	1989	1992	1995	2007	2011	2013	2014	2015	1 quarter of 2016		
The share of the shadow economy to GDP	12.0	33.6	48.9	54.9	34	35	42	40	41		

For comparison, according to the research of Frederick Shneider, the average size of the shadow economy in Europe in 2015 amounted to 18% of GDP. The lowest share of the shadow economy in GDP traditionally is observed in Switzerland (6.5%), Austria (8.2%), Luxembourg (8.3%), the Netherlands (9%) and the United Kingdom (9.4%). In Germany this index estimated at 12.2% of GDP [23].

[The scale of the shadow economy in post-socialist countries (in% of the country's GDP) was calculated by the method of D. Kaufmann-A. Kaliberda and by the method of M. Lasko]



The results of the World Economic Forum's 2016 – 2017 according to the global competitiveness index Ukraine ranks 85 place with 138 countries were evaluated (table 2) [26].

Table 2 Competitiveness of Ukraine in the world

	Years									
The index of global competitiveness (the position of Ukraine on the main components)	2014-2015 (144 countries)	2015-2016 (140 countries)			2016-2017 (138 countries)					
	index	index	increase ↑/ decrease ↓		index	increase //				
			nominal	real		nominal	real			
Institutions	130	130	-	+	129	<b>†</b>	+			
Infrastructure	68	69	+	+	75	+	<b>+</b>			
Macroeconomic environment	105	134	+	+	128	<b>†</b>	<b>†</b>			
Health care	82	82	-	<b>+</b>	83	+	<b>+</b>			
Higher education and professional training	40	34	<b>†</b>	<b>†</b>	33	<b>†</b>	<b>†</b>			
The efficiency of market	112	106	<b>†</b>	<b>†</b>	108	+	<b>\</b>			
The efficiency of the labour market	80	56	<b>†</b>	<b>†</b>	73	+	+			
The development of financial market	107	121	+	+	130	+	<b>\</b>			
Technological readiness	85	86	+	+	85	<b>†</b>	<b>\</b>			
Compliance with the requirements of the modern business	99	91	<b>†</b>	<b>†</b>	98	+	+			
Innovation	81	54	<b>†</b>	<b>†</b>	52	<b>†</b>	<b>†</b>			

The real importance of change of the index of global competitiveness is defined taking into account the number of countries, which have been evaluated.

The table shows that in global competitiveness index Ukraine improved its position in terms of «higher education and vocational training, «innovation», but rapidly reduces its position on the indicator of the development of the financial market».

This is due to the ineffective policy of NBU, the lack of reforms in the field of development of non-government pension provision, underdevelopment of the Ukrainian stock market, etc., but confirms the fact that Ukraine has significant intellectual potential, which, unfortunately, not valued and not supported by the State and big business. In addition, the reforms that are necessary on the path of convergence, slowed or are one-sided nature. So, in our opinion, the Ukrainian Government uses just destructive measures, without trying to hold back or smooth economic and social shocks that accompany these actions. For example, the gradual withdrawal of energy tariffs to the European level is not justified economically, because the main energy supply companies with funds not updated during Soviet times, and wear the networks supply exceeds 80%.

Another step of the Ukrainian Government to the convergence was the termination of government regulation and actually control the formation of consumer prices for food, medicines, and other socially important products. Dropped the concept of «maximum ROI», limiting the level of allowances. Consequently: oligarchic group retail chains of hypermarkets, which actually form a private monopoly formations, acting in concert when setting prices. Antimonopoly Committee thus detects inactivity, which can also qualify as a destructive latent management. This has led to the arbitrary increasing prices of the most popular food: bread is at 47%, pasta -49%, fish -51%, fruits, vegetables -67%,



utilities increased three times, medical – almost double. For the six years the life of average Ukrainians increased by 80%, and real income has decreased more than 10% [27].

In earlier publications we justify conceptually economic model of national economy of Ukraine, which would be satisfied with the economic interests of the majority of citizens and society in general [24, 25]. We defined components of a successful economy:

- 1) information and informatization;
- 2) intellectual capital;
- 3) availability of resources.

We considered those three components, using philosophical concepts and Pareto principle. Grounded presence of deregulation of these components of a successful economy in the Ukrainian society.

This disbalance leads to negative consequences in the Ukrainian society, which hinder the economic convergence. Namely:

- 1) in Ukrainian society perceive information, interpret it, have access to information sources and technologies. Result: information weightiest arms control community;
- 2) level of intellectualization of the human capital and the desire for continuous self-improvement and self-education. Consequence: the ease of managing the crowd with a low intellectual level, are not able to have their own opinion and position;
- 3) in access to resources and other economic and social benefits. For the Ukrainian society a disbalance in the access to material resources and goods is 90:10. The consequence is the stratification of society on the rich and the poor, the almost complete destruction of the «middle class».

These patterns have spawned two big problems in Ukraine: 1) politicized oligarchy; 2) passive behavior of the participants of economic relations. These problems are disease of the Ukrainian society and latent factors containment of economic convergence in the European region. Because these imbalances by Pareto are causes of mass diseases of mankind, that little investigated, but because scientists have not yet classified, and thus – the diagnosis is not represented in the timeline of medical diseases.

The question arises: is it possible to overcome these "diseases" in the body of the national economy, which we have identified as "passive behavior of the participants of economic relations through ignorance" and "politicized oligarchy"? the answer is simple, and it's a lot of talk, but few do. Known ancient folk wisdom: Everybody wants to change the world, but no one wants to start with yourself! Declare can be beautiful and a lot. But nothing will change until every member of the Ukrainian society (top - down) do not realize that changes need to start with yourself. Then will appear in those who have the opportunity to do real economic reforms that would have made Ukraine a successful, prosperous country, contributed to the real economic convergence of Ukraine with the developed countries of the European Union.

The conclusions and prospects of further development. Consideration of the problems that hinder the economic convergence of Ukraine with the European region has reached conclusions on the need to development and implementation of the state accommodative policy, aimed not at the exacerbation of social tension in the Ukrainian society and deepening of the economic crisis, but to mitigate the shock effects, due to convergence processes. In this context Ukraine must take into account the relevant experience of the countries of EU and apply the most effective tools of convergence and measures shock against state regulation, in particular, such as:

- building export capacity and activation of foreign trade;
- software innovative restructuring of the economy in general and the sphere of employment in particular;
- the increase of the educational qualification level of labour resources and the formation of favourable conditions for creative implementation of scientific and innovation on the Ukrainian markets, stopping the outflow of intellectual capital:
- ensure strict control over the use of international organizations funds in the economic development of the sectors of the national economy, the structural changes in the economy, creating innovative, energy-efficient industries and new iobs:
- take structural measures for bringing the economy to separate government from business;
- the formation of a new national paradigm of social and economic responsibility to the society, which is based on the principles of corporate culture and ethics in civil and economic relations.