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THE EU GROWTH POTENTIAL AND OFFSETTING BREXIT. IS ACCESSION OF UKRAINE A SUITABLE OPTION?

Abstract

The development of the European economy in the 21st century will be determined by many exogenous and endogenous factors. Most of the EU countries are highly competitive and have good indicators of innovative development of their economies. These are the necessary conditions for the implementation of the «Europe 2020» strategy based on the knowledge economy, innovation and sustainable development. The EU leadership in global economy has been weakened by internal economic crisis, exit of the United Kingdom from the EU, refugee crisis and Russian expansionist policy and annexation of the Crimea. The EU leadership is to be secured in the coming years by deepening political union (common fiscal policy, euro-army, coast guard, Europol, common foreign policy, direct election of the President of European consul and the Commission), cohesion policy and strong development policy, creation of new EU funding programs for the member and candidate countries, enlargement with the accession of new

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member countries from the Western Balkans, Ukraine, Moldova and Georgia, Iceland and others countries.

Key words:

The EU, regional and global economic strategy, enlargement, global competitiveness, strategy «Europe 2020», innovative development of economies, knowledge economy, sustainable development, Brexit.

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1. The EU growth potential by 2020

The modern challenges in Europe include the conversion of traditional bilateral relations in Western Europe in multinational relations in the context of European integration, maximizing and expanding the internationalization of production and the mechanisms of economic cooperation, ensuring the EU special role in the international politics and economics and world trade, as well as ensuring global and regional peace and addressing external security threats and terrorism in our territory.

The European Union (EU) of 28 countries-states is currently the only association in the world, which has passed the five stages of economic integration. The EU started basically as an imperfect customs union, a common external tariff was the foundation of the trade integration. With the gradual deepening of integration it created new shared supranational tools. This was the plan for the single internal market, economic and monetary union, the same will happen with the fiscal and political union of the EU.

The European Union (EU) is the most important regional organization of economic and political integration in Europe. It is also the first economy now in the world and has become the leader in the world by GDP, international trade (35%), global foreign direct investment (50%), inbound tourism (50%), the overall transfer of humanitarian assistance (60%) and environmental protection.

7.3% of the world population reside in the EU-28 (510 million people lived in the EU in 2016). With only 12% of the workforce of the world, Europe in the last twenty years produced about one quarter of the global GDP (1).

The European economic integration is closely linked to globalization and transnationalization. The EU Members-States are open economies and are in close interplay and interdependence with all countries of the world economy.

The development of Western European integration not only significantly affects the structure and status of international financial transactions, but the European Union is also a key factor of the trade policy liberalization at the global level in the context of «open regionalism».

By the late 20th century the fifteen countries of the EU reached the post-industrial economy level including social policy, developed transnational society of individuals (civil society) and the competitive social market economy. The model of economic and social development of the EU became a global model of economic integration.

Article 1 of the Treaty of Lisbon (2009) noted that the European Union is founded on representative democracy based on the European values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights including the rights of persons belonging to minorities.

Being the most advanced and unique in the world association of systemic integration of national economies, the EU forms the external economic relations based primarily on the long-term strategic interests of the entire international community instead of short and narrow national interests of individual countries. The foreign economic strategy of the EU considers the beginning of the direct relationship between reducing global economic imbalances and the consolidation of peace and security in Europe and around the world.

In order to strengthen its position in the global market in intensive basis the EU seeks to implement an economic development strategy for the first quarter of the 21st century, based on the «Lisbon Agenda» (2000–2010) and the New European strategic development policy «Europe 2020» for the period 2010–2020.

The Lisbon Strategy was based on the perception of the most developed countries to change the existing world economic order, to stop the global subordination of the interests of humanity in the pursuit of short term profit at the expense of social justice and the environment, to deepen the social market principles of economic policy and to transform the «consumer society» into a society of accumulation of spiritual values.

The European strategy «Europe 2020» is based on three key factors for strengthening the economy: a) smart economic development and growth based on knowledge and innovations b) sustainable development, the creation of an economy based on the efficient use of resources, environment and competition and c) a comprehensive development helping to increase the level of employment, to achieve of social and territorial cohesion.

Exhausting the possibilities of the existing technological system resulted in decrease of the GDP growth rates. However, today the vast majority of the world population (over 5.5 billion people) live in countries of the third and fourth technological system (agricultural and industrial). Only residents of countries of the «golden billion» live in the fifth technological system (Digital Revolution), based on innovative production technologies (microelectronics, automation, computer systems, biotechnology and nanotechnology, etc.).

According to the Lisbon Strategy, the EU-28 Member States, must build a «knowledge economy», which will ensure the dynamics of GDP growth and higher competitiveness in the world. And it will happen by means of increasing the flows of public and private investment in research and development (R&D), and the introduction of new energy efficient and environmentally safe technologies and further improvement of social welfare and health care.

However, as for the indicators of innovative development, during the first decade of the 21st century by the number of scientists and engineers engaged in R&D as well as the EU's readiness for transition to a «knowledge economy» only three EU countries (Denmark, Finland and Sweden) exceeded the USA and Japan, while the larger EU economies (Germany and France) are still behind. According to the index, only two EU countries (Finland and Sweden) outperformed the United States by the use of new technologies in the economy (Table 1).

Between 2004 and 2015 the EU has overtaken the United States in terms of GDP by 1.1 times, while the volume of exports of goods outside the EU exceeded 1.4 times. Continuing to be the leader of the environmental recovery of the global economy, the EU in March 2007 decided in 2020 to reduce anthropogenic greenhouse gas emissions by 20% compared to 1990 and to increase the share of renewable energy sources (RES) in the total energy consumption of the EU by 25%.

The leading position of the EU in the global economy can be secured in the coming years and also be extended with the expansion of foreign trade and investment with the creation of free trade areas with Canada and the United States (Transatlantic Trade and Investment Partnership – TTIP). The EU exports around €310 billion in goods (2014) and €160 billion in services (2013) to the US. And in 2013 the US was the leading investor in the EU with €1,650 billion in investment stocks) (2). Also the EU is implementing the strategy of rapid transition to new energy-saving technologies to achieve energy independence from Russian energy by the simultaneous use of new sources of oil and natural gas in Greece, Cyprus and Israel and importing fuel from alternative suppliers.

Table 1

Indicators of innovative development of the USA, Japan and the EU-28

Country	Number of scientists and engineers engaged in R&D per million people		Index of readiness for «knowledge economy»*	Index of availability and use of the latest technologies **
	1990–1999	2000–2010	2013	2013
USA	4179	4663	9.08	6,44
Japan	5858	6162	8,56	6,28
China	549	1530	4,35	4,40
EU countries – 28				
Sweden	4512	7110	9,52	6,84
Finland	6330	7707	9,37	6,65
Denmark	3322	7836	9,58	6,36
Netherlands	4014	4853	9,36	6,41
Germany	4253	4833	8,87	6,30
Ireland	2709	3774	8,87	5,75
Great Britain	4224	5162	9.08	6,36
Belgium	4067	4842	8,73	6,37
Austria	1346	6083	8,89	6,42
Estonia	2722	3583	8,3	5,81
Luxembourg	3766	7570	8,65	6,20
Spain	2108	4087	8,24	5,78
France	2726	5376	8,47	6,36
Czech Rep.	1906	2352	7,70	5,52
Hungary	1634	2245	7,67	5,50
Slovenia	3723	5186	8,29	5,60
Italy	1146	1616	6,84	4,95
Malta	1573	2601	7,88	5,98
Lithuania	2970	3122	7,60	5,64
Slovakia	2606	2723	7,12	5,58
Portugal	1792	4202	7,22	6,26
Cyprus	688	1563	7,47	5,67
Greece	1887	2637	7,48	5,18
Latvia	1363	2458	7,51	5,06
Poland	1858	2135	7,37	4,65
Croatia	355	615	7,19	5,10
Romania	1745	1164	6,87	4,32
Bulgaria	1827	1975	6,73	4,32

Country	Number of scientists and engineers engaged in R&D per million people		Index of readiness for «knowledge economy»*	Index of availability and use of the latest technologies **
	1990–1999	2000–2010	2013	2013
The candidate countries and potential candidate countries for accession to the EU				
Georgia	–	–	5.07	4.4
Moldova	–	663	5,32	4,1
Bosnia and Herzegovina	–	–	4.24	4.9
Albania	–	–	4.08	4.1
Ukraine	–	1331	6,38	4,3
Serbia	–	1213	3.4	4,1
Montenegro	–	–	3.4	4,7
Turkey	365	890	5,14	5,4

Notes:
* World Bank Knowledge Economy Index –KEI «10» refers to the readiness of the country (region) for the transition to the knowledge economy. Classification of member–states of the EU–28 according to the index EFS (European Science Foundation)
** The maximum value of «7» corresponds to the use and availability of all the new technologies in a country (Availability of latest technologies).

Sources: World Bank, IBRD, World Development Report 2000–2016; http://www.worldbank.org/content/dam/Worldbank/Publications/WDR/WDR%202016/WDR 2016_Concept_Note.pdf.

The EU is still lagging behind the United States with respect to the growth rate of labor productivity (1.5% per year, compared with 2% in the USA) and creating favorable conditions for entrepreneurship. In the year 2007, before the financial crisis, only two EU countries (Denmark and Great Britain) entered the «top ten» by the attractiveness of the business environment (among 181 economies), giving primacy to Singapore, New Zealand, the USA and Hong Kong (3).

According to the report «Doing Business 2016, Measuring Regulatory Quality and Efficiency», published in 2016 by the World Bank Group, in 2016 the group of world leaders with the most favorable business climate includes several EU countries. Denmark is on the 3rd place, Great Britain – 6th, Sweden – 8th, Finland –10th, Ireland – 19th among 189 economies (the United States – 6th). As for the economies in transition to a market economy from the 1990s including the post-Soviet republics, such as Baltic countries, Lithuania was the 17th, followed by Estonia (22nd), Latvia (24th), the FYROM (25th) Armenia(35th), Moldova (52nd), Bosnia and Herzegovina (79th), Albania (97th), Montenegro (46th), Ukraine (83th), Serbia (59th) place (4).

One of the reasons for this situation is the lack or the slow pace of reforms needed to modernize the economy and the competition law, which is not made on time, because some EU countries serving the narrow protectionist economic interests repeatedly used their veto power in the EU Council.

Considering the importance to improve the business climate, in the last 3 years Italy and Greece improved their ranks from the 73th and 100th place in 2011 to 65th and 72th place respectively by means of simplifying the labyrinthine bureaucracy and fighting corruption to free enterprises and to attract foreign investment (4).

The Lisbon Treaty, which was signed on October 18, 2007 (in force since December 1, 2009) can contribute to the effective implementation of economic strategy of the EU. It clearly defines the division of powers between the Union and the Member-States (exclusive, shared and supporting competencies), giving the EU the exclusive competence in trade, monetary and customs policy and the adoption of uniform rules of competition.

Dealing with the debt crisis of the EU member states in 2010–2011, implementation of specific programs of financial assistance to Greece and other Member-States, establishing the European Stability Mechanism on December 17, 2010 by the European Council (replacing the European Financial Stability Facility (EFSF) and the European Financial Stabilization Mechanism (EFSM)), and the conclusion of the fiscal pact on March 3, 2012 ensured the financial stability of the euro area and the common EU economic governance and helped to prevent worldwide contagion (5).

Transition took place to making decisions in these areas by the EU Council by a qualified majority, excluding the possibility of the prevalence of short-term interests of individual Member-States in favor of the Union's strategic interests, which enhances the efficiency of economic activities in all the EU countries.

The entry into force of the Lisbon Treaty also opened the way for the accession of Croatia on July 1, 2013 and thereafter for further accession of the Western Balkans before 2020. Ultimately by 2025 the most likely candidate countries for accession to the EU could be Moldova, Georgia and Ukraine.

Development of economic relations with the neighboring countries, strengthening European security, creation of a single continental energy infrastructure and the joint fight against international terrorism, organized crime and illegal immigration take an important place in the strategy of the EU.

During the 2000s the European Union has concluded the Stabilization and Association Agreements (SAA) with the countries of the Western Balkans (Albania, Serbia, Bosnia-Herzegovina, Croatia, FYROM and Montenegro), which opened prospects for their European integration. The regional trade agreements and Autonomous Trade Measures – ATMs, between the EU and these countries require the abolition of customs duties in bilateral relations with the aim of creating a free trade area (FTA) and future integration.

These agreements are the institutional basis for deepening cooperation between the European Union and the Western Balkan countries in the area of sustainable economic and social development and consolidation of market economy and democracy. Since 2006 the European Union has been supporting the Western Balkan countries with the Instrument of Pre-Accession Assistance (IPA).

Along with the accession of 10 new members, in order to develop relations with the neighboring countries of the EU in Eastern Europe and the Mediterranean region in March 2003, the EU adopted the principles of the European Neighborhood and Partnership Instrument (ENPI), the communication from the European Commission «Wider Europe – Neighbourhood: a New Framework for Relations with Our Eastern and Southern Neighbors». In 2003 the EU and Russia have signed an agreement for the creation of four common spaces: common economic space; common space of freedom, security and justice; space of cooperation in the field of external security; and a space of research, education and cultural exchanges.

The Declaration of the Prague Eastern Partnership Summit in 2009 about the EU relations with the Eastern Partners (Armenia, Azerbaijan, Georgia, Moldova, Ukraine and Belarus) was upgraded by the conclusion of the «Association Agreements» and Deep and comprehensive free trade agreements (DCFTA), which replaced the Partnership and Cooperation Agreements. This strengthens the new European Neighborhood Policy (ENP), endorsed by the European Council in June 2011 and by the EU summit with six Eastern European countries in September 30, 2011.

Besides the initiative on the Eastern Partnership within the framework of the ENP, in 2007 the EU launched the initiative «Synergy for Black Sea» in order to promote economic development and cooperation at regional level. It aims at development of bilateral relations with the members of the regional organization of the Black Sea Economic Cooperation (BSEC). Greece, Bulgaria and Romania are the EU members and BSEC members. The EU recognizes the important role of the BSEC as a region of Europe (wider Black Sea area) for the transit of energy resources, assuring the prospect of creating a free trade with all countries. The European Commission has observer status in the BSEC institutions.

On June 27, 2014 the European Union signed association agreements with Ukraine, Georgia and Moldova, wishing to approach Western Europe and to become the EU Member-States in future, despite Russia pressures them for integration into the Eurasian Customs Union.

With the gradual integration of all the countries of Eastern Europe into the EU, the existing differences in the level of production costs in Western and Eastern Europe will inevitably lead to the strengthening of intersectoral and transnational competition, which is the main driving factor of economic progress. The transfer of business sectors and labor intensive manufacturing from Western to Eastern European countries with low taxes and cheaper labor will help to develop the economy of the entire European continent and to increase the competitiveness of European products on world markets.

Enlargement can have a positive effect on reducing the extremely high population density in a number of the EU countries, as well as on reducing anthropogenic greenhouse gas emissions by improving the ecological situation in the countries of the EU because of the rational distribution of industrial units.

Accepting the potential EU candidate countries (Serbia, Montenegro and Albania) and possibly potential candidate countries (Georgia, Moldova, Ukraine and Bosnia and Herzegovina) by 2025 is appropriate not only politically, but mainly economically, as it would strengthen the EU's capacity.

Nowadays the EU accession negotiations with Turkey, which has large territorial and demographic potential deadlocked after eleven years (official opening in 2005). After having opened only 14 chapters they closed only one (research and technology), and the remaining 20 chapters are outstanding (6).

After the incursion and annexation of the Crimea by the Russian Federation in March 2014 and the direct involvement of Russian troops in the hybrid war in Eastern Ukraine (Lugansk and Donetsk), all countries of the European Union, the United States and other NATO countries converge in their view of the intensification of collective security and strengthening European and international security by increasing military spending and the integration of the countries of the European neighborhood.

In March-August 2014 the United States, the EU and other Western countries imposed economic sanctions against Russian expansionist policy in Ukraine and the pursuit of Russia to integrate all the lost territories of the former USSR to create a new «Soviet Union» in the form of the Eurasian Economic Union. They aim to defend the sovereignty, political independence, unity and territorial integrity of Ukraine within internationally recognized borders, as expressed in the UN resolution (UN 68/262/27-3-2014).

The tragic pursuit of setting up a new «Soviet Union» leads to the policy of Ukraine, Georgia, Moldova and later other countries to achieve rapidly complete independence from the influence of Russia and to integrate into Euro-Atlantic structures.

Further economic sanctions of the USA and the EU and the countermeasures (Russian embargo on western food and agricultural products in August 2014) lead to gradual isolation of Russia from international markets of goods and capital with painful consequences for the Russian economy.

The gradual increase of energy independence of the EU from Russia by saving energy resources by development of renewable energy by 2020, the importation of liquefied natural gas from the United States and other countries (Azerbaijan, Iran, Libya, etc.) and the extraction of new oil and natural gas in Greece, Cyprus and Israel will lead to further isolation of Russia from the international markets and decrease of its foreign currency earnings. According to the American Senator John Thune «one of the best ways to isolate Russia and help our European friends to withstand Russian aggression is to strengthen our economic ties with the European Union» (Thune 2014).

Thus the political and economic situation in Eastern Europe today accelerate the negotiations of the EU and the United States launched in 2013 to eliminate trade protectionism and to conclude an agreement to establish a free trade area (the US-EU free trade agreement – the Transatlantic Trade and Investment Partnership). It may enhance economic ties and integration of two large economies, which now constitute 45% of the global economy, and may contribute to the GDP growth by 1% on both sides and create new jobs.

It is more essential today than ever before to transform the European Union into «a second military force» in the world, along with the USA, by strengthening and reorganizing the defensive structures to protect its eastern and southern borders. In fact it can be achieved quickly with the transformation of the EU into a full political union by 2020. The UK exit from the EU will encourage greater deepening of the EU political integration: a) direct election of political officials in the EU (President of the European Council and European Commission, etc.), b) transferring foreign and defense policies of member countries to the EU supranational institutions, c) creation of a strong common European army, Europol, coast guard, and joint security services addressing external threats, d) common corporate and personal income taxes.

Solving the problems of global economic inequality in the 21st century depends largely on the EU itself. For the implementation of the Union's development plans, it is necessary to enlarge and deepen mutually beneficial trade and economic cooperation with all European countries and other continents.

Priority of the EU is deepening economic cooperation in 2003 with the conclusion of Association Agreements under the European Neighborhood Policy (ENP) with the countries of Eastern Europe and the Mediterranean region, and EPAs (Economic Partnership Agreements) with 79 countries of the African, Caribbean and Pacific Ocean (ACP countries).

Regional integration in Europe, strengthening integration of the economies of the Member States and the candidate countries is a continent-wide issue, which accelerates the process of globalization and the decline in the level of EU protectionism against competing integration blocs (NAFTA, ASEAN, etc.) and third countries (China, Japan, etc.).

One of the priorities of the EU is to strengthen economic, trade and other relations with the USA and other countries in the Americas, Africa and Asia, and the creation of intercontinental trade associations.

On October 6, 2010 the EU signed an agreement with South Korea to create a free trade area by July 2011 (the first free trade agreement between the EU and an Asian country).

The signing of a Comprehensive Economic and Trade Agreement (CETA) between the EU and Canada for the creation of free trade on September 24, 2014 in Ottawa portends faster achieving bilateral trade agreement with the USA.

The Free Trade Agreements between the EU and Mexico in 1997, Chile in 2005, Peru and Colombia in 2013 and countries of the Caribbean Forum (CARIFORUM) in 2008 and the EU-Mercosur Framework Cooperation Agreement in 1995 created the conditions for establishment of a transatlantic FTA between countries of America and countries of the European Economic Area (the EU plus EFTA).

The EU firmly upholds the principles of free-market competition in international trade. Within the WTO (World Trade Organization) it represents the interests not only of member countries, but also of other European countries, and dozens of other countries in various continents, which have concluded Partnership Agreements or Association Agreements for trade and economic cooperation with the European Union.

The consolidated efforts of the European Union, the USA, Japan, Canada, China, India, Brazil and other world financial leaders prevented the conversion of the financial crisis into a sustained global economic downturn.

The most effective way to deal with the crisis at the national and global levels is to support industrial employment by encouraging investment demand by reducing interest rates on loans to the real economy and the reduction of taxes on consumption. Equally important are measures to prevent illicit capital flight to offshore areas and further liberalization of international trade, which will significantly reduce the world prices of energy resources and raw materials for economic growth.

The increase of effective demand in China, India, Mexico, Egypt and other countries with high rates of population growth, accompanied by increased food imports, under the downward trend in global food stocks (global cereal stocks decreased from 360 in 2003 to 210 million tones with a total production 690 million tons) created favorable conditions for the steady sale of products of the European agricultural sector.

The steady growth of the global economy in the XXI century can only be ensured by strengthening the European Union as a stabilizing agent, and especially more advanced level of socially and ecologically oriented production.

Sustained high rates of economic growth in the enlarged EU-28 can only be obtained by the implementation of structural reforms aimed at sustainable development based on the knowledge economy, the reform of the pension system, creating new jobs and saving energy resources.

Rational use of existing resources for economic growth allows the EU-28 countries and the EFTA to increase annual GDP growth rates. In the first quarter of the 21st century it can be 1.8–2.8%, while the new EU members can experience 4–6% economic growth due to the expansion of trade and other static and dynamic effects of economic integration.

The development of the European economy in the 21st century will be determined by many exogenous and endogenous factors. The most important of them is the ability of the European Union to maintain its dominant position in world production and trade under increasing interdependence of all parts of the world and competition with the USA, Japan, China and the newly industrialized countries of Asia and Latin America (Alexandridis, Konstas, 2011).

However, there are objective preconditions for increasing the rates of growth of the European economy, of which the main are:

- The high level of stability in the vast majority of European countries, due to the absence of socially unacceptable giant rift between «two poles» of wealth and poverty. The index of the uniform distribution of national income among the population (Gini index) in European countries does not exceed 38%, except in Bulgaria (45%), Turkey (43%), Russia (42%) and Georgia (41%).
- Leadership in the export of investment products for industry and transport. In 2010, the «top ten» global steel exporters included the EU-28 (13.8%), Russia (9.7%), Ukraine (8.9%), Turkey (5.7%) and only three non-European countries: Japan (15.1%), China (13.8%), Brazil (11.7%), South Korea (8.5%) and the USA (3.5%).
- In 2005–2015 the supply of products and components for production equipment to foreign subsidiaries of European companies have provided 30% of the overall growth in car production, especially in joint ventures in Eastern European countries and China.
- In 2007 the aerospace consortium «EADS» in cooperation with the strongest aerospace companies in Europe «British Aerospace» (Great Britain), the «Daimler-Benz Aerospace» (Germany), «Aerospatiale» (Italy) and «Gasa» (Spain), surpassed American companies «Boeing» and «McDonnel-Douglas» in sales volume of passenger aircrafts (Airbus), having ½ of global sales (more than 11,000 private aircrafts Airbus have been ordered around the world. The future cooperation of Airbus with the Ukrainian Antonov State Aircraft Company could further reduce the cost of European aircrafts in the global market. The production of

cheaper fire-fighting aircraft of the Ukrainian Antonov in Kiev will help all countries of southern Europe in most aircraft units for fire fighting.

- The dominance in the global banking system (the assets of the non-public banking sector in the European Economic Area (EEA) amount to 400% of the total GDP of the EU-15 and EFTA, which is comparable to the size of the global GDP) and dynamic development of the non-state-owned banks in the former socialist countries (the total assets of commercial banks in Central and Eastern Europe that were created in the 1990s reached 100% of GDP, while in Russia and Ukraine they exceeded 40% of GDP).
- Leadership in the global market for telecommunications services and space (more than half of commercial flights for launching satellites are made by French, Russian and Ukrainian rockets «ARIANE», «Cyclone» and «Zenith» within international programs «Globalstar», «Sea Launch», etc.) (1; 3; 9).

Among other things, concerted efforts of all European countries are necessary to resolve a number of problems of the continent, the most relevant of which are:

- The achievement of a political settlement of territorial conflicts in the Balkan and Black Sea countries (Serbia, Bosnia and Herzegovina, Moldova, Northern Caucasus, Ukraine) and the acceleration of the economic recovery.
- Ensuring that development priorities of the European market include reducing dependence on possibly unstable economies and strengthening cooperation with key trading partners of Europe – the USA, China and Japan.
- Diversification of sources and routes of supply of the continent with energy resources and industrial raw materials.
- The innovative modernization of the productive base of European countries to eliminate lagging in labor productivity compared with the USA and Japan.
- Lowering interest rates to finance the production and trade and to attract investments in the real sector of the economy.
- Stimulating the aggregate demand by reducing taxes on business and individuals in Western countries and increasing wage levels in Eastern European countries.
- Increasing inbound world tourism, financial services and other services in European countries.
- Stopping illegal immigration and normalization of the labor market.

The enlargement of the European Union and strengthening of the euro contribute to stabilization of the global geo-economic tripolar structure with three major markets – European, American and Asian-Pacific Region, which was formed in recent years.

At the same time, the growth of the European economy is hampered by protectionism in key trading partners – the United States, China and Japan, one aspect of which is the continuous process of devaluation of the dollar, the Chinese Yuan and the Japanese yen against the euro and other European hard currencies.

Objectively the inevitable deepening of international economic cooperation as the most likely direction of the transformation of the structure of the global economy determines the transformation of the 21st century triad «US-EU-Japan triad» of interrelated economies in the European Union, NAFTA and Asia Pacific Economic Cooperation (APEC). According to S. Huntington each of these economies will unify the countries with common cultural elements (Huntington, 1996).

This triad in the first third of the 21st century will complete the process of forming a new global market, which will include three major continental markets: European, North American and Asian-Pacific.

2. Offsetting Brexit. Is accession of Ukraine a suitable option?

Up to now the EU has been enlarging. Enlargement slowed down after the 2008 financial crisis. But Brexit can be a precedent which can lead to shrinking of the EU economy. There are two main solutions to the Brexit crisis: more consolidated EU-27 and further enlargement. In the near future there is no country that can offset exit of the UK by means of accession.

European Free Trade Association countries are already highly developed economies and in the longer term period may decide to join. But probably it may happen in case of economic difficulties – the case of Iceland shows that it considered accession during the recent financial crisis. Otherwise higher income per capita is not a stimulus to participate in redistribution of income through the EU budget.

Subject to further economic development in longer term period, strategically accession of such countries as Western Balkan states, new Association countries (Ukraine, Moldova, Georgia) and Turkey can help the EU to preserve its influence in the world economy. But a lot will depend on these countries – the pace of economic growth and institutional changes.

In our analysis we would like to focus on Ukraine – a country which economic potential is comparable to the UK, considering its population, territory, and partially economic structure, as well as pro-European aspirations.

In generally the territorial demographic potential (territorial-demographic potential, Tdp = A x P (thousand km^2 x million residents) of Ukraine is 27282.72 (603.6 thousand km^2 x 45.2 million residents) is approximately twice as larger than in United Kingdom, which is 15273.72 (243.6 thousand km^2 x 62.7 million residents).

Nowadays the main difference between the UK and Ukraine is their actual economic size (in 2015 GDP based on purchasing power parity (PPP) valuation was $2700 and $340 bln) (1), level of economic development (the GDP per capita, PPP, was $41000 and $8000), macroeconomic stability, economic structure and institutional framework. The latter challenge is actively being tackled according to the provisions of the Association Agreement with the EU. But even nowadays we can observe some similarities between the UK and Ukrainian economies and some promising trends.

Before the crisis of 2014–2015, this was largely caused by external pressure of Russia, in 2011–2012 Ukraine experienced annual growth of adjusted net national income by more than 6% in contrast with 1% in the UK. The current account deficit in 2015 was almost equal (5% GDP) to the one in the UK as well as the trade balance (–2% GDP), but Ukraine has almost balanced it in 2016. Gross savings in Ukraine (13.7%) are slightly larger than in the UK (12.2%), though it is much smaller than the EU average (21.3%). Therefore Ukraine will need foreign investments (20-30 billions USD annually) to improve its economic performance during 2017-2025 in order be ready for accession to the EU and offset the Brexit.

Trade openness of Ukraine is twice as larger considering the ratio of exports to the GDP. Already in 2014 the weighted mean most favored nation tariff rate and the share of tariff lines with international peaks was only slightly larger than in the UK as a member of the EU customs union. The Deep and Comprehensive Free Trade Area will help it to increase its trade and tariff integration with the EU.

Ukraine is more dependent on personal remittances from abroad, but their absolute amount is slightly larger than in the UK. The remittances are generated by emigrants, who largely work in the EU. Since the emigration ratio is already substantial and Ukraine returns to economic growth, emigration is more likely to decelerate than to accelerate.

The labor force in Ukraine is only 1.4 times smaller. Despite the demographic crisis, the age dependency ratio in Ukraine is smaller (in 2015 43% compared to 55% in the UK). The share of people older than 65 years in the population is smaller (15.3% compared to 17.8%). Nominally the GINI index in Ukraine is smaller, but it can be underestimated because of the shadow economy. The share of females in employment is even larger in Ukraine (49% compared to 46%).

The general government final consumption is equal in both countries (19% GDP). Ukraine has a 6.6% ratio of education expenditure to GNI (in 2014), which is higher than in the UK (5.4%). The gross enrolment ratio in tertiary education is larger in Ukraine (82%) than in the UK (57%). This resulted in a situation that more labor force in Ukraine (46%) has a tertiary education than in the UK (40%). The number of research and development personnel in Ukraine is 87 thousand (full-time equivalent), which is 22% of the UK indicator (11). The ratio of physicians to the population in Ukraine is 25% bigger and is equal to the EU average.

The agricultural value added in Ukraine and the UK are similar ($11 bln and $17 bln in 2015). The area of forests in Ukraine in 3 times larger (while the overall territory is 2.3 larger). More people are employed in industry in Ukraine (26% compared to 19%), but it is closer to the EU average (24%). The share of manufacturing in GDP is bigger (14% compared to 10% in the UK) and is also close to the EU average (15%). The shares of chemical industry, and textiles and clothing in manufacturing are almost equal. There is also a substantial potential in some high-tech industries, such as aircraft and spacecraft construction. But in 2015 only 6.5% of Ukrainian exports were high-tech exports (compared to 20.8% in the UK and 16.2% in the EU), therefore there is a potential for high-tech industry development under increasing investment inflows.

Ukraine has only 2.5 times less tourist arrivals, but international tourism receipts are 27 times less, therefore potential of tourism industry is not fully exploited. But the share of travel services in commercial services is slightly less than in the UK (11% and 13%). The number of mobile cellular subscriptions is almost similar to the UK. The length of railroads is almost 1.5 times larger.

The ratio of energy imports to energy use was smaller in Ukraine already in 2013 (26% compared to 40% in the UK). Per capita consumption of energy is slightly smaller than in the UK, though energy efficiency is definitely lower.

The armed forces personnel is even larger (204 thousand in 2014 compared to 154 thousand). In 2014 arms exports in Ukraine were only 2.5 times smaller than in UK in 2015, though it decreased in 2015.

Thanks to ongoing reforms Ukraine has improved its business regulations and has approached the EU and UK in several areas: number of start-up procedures to register a business, time required to build a warehouse, time required to enforce a contract and time required to register property. But a number of areas require further improvement.

We also use the UNCTAD data to compare the structure of the Ukrainian and the UK foreign trade. In 2014 Ukrainian exports were 10 times smaller than the UK exports, and the exports structures are very different. Ukraine relies much more on exports of food and metals (12).

But in several cases Ukraine exports more in absolute terms than the UK, which could add more weight to the EU in these markets in future:

- agricultural products (cereals, eggs, juices, oil seeds and vegetable oils);
- wood and some wood products;
- minerals (ore and concentrates, especially of iron; coal and coke; stone, sand and gravel)
- energy (electric current);
- chemicals (fertilizers);
- iron and steel;
- railway vehicles & associated equipment.

The latter is the only type of engineering industry products, where Ukraine outperformed the UK. We can also consider the products of this industry, where an export of Ukraine was at least 30% of the UK exports:

- some types of equipment for distributing electricity;
- vapor generating boilers, steam turbines and parts;
- television receivers;
- sanitary, plumbing, heating fixtures.

Ukraine also preserved potential for development of some high-tech industries. As for the space industry Ukraine is among the few countries in the world (fourth country to develop the space industry in the world), which have largely full technological process of producing space rockets and satellites, components, rocket fuel and rocket engines. The rockets have been launched at 4 foreign space ports. About 300 satellites and spaceships have been launched to space for various countries (13). Ukraine has facilities for producing airplanes, air engines, avionics equipment, landing gears and airplane maintenance. Several universities provide education for future employees in air and space industry (Krymska, Tretiak 2014). But the current production is below potential level and the market share is low (Heyets, 2013).

Then we reuse the data by UNCTAD to analyse the exports of the EU, EFTA, the countries of the Western Balkans, the associated countries of the Eastern Europe and Turkey. To determine the potential EU members toward the competitors in the existing member states, we use Pearson correlation formula:

$$r = \frac{\sum_{i=1}^{n}(x-\overline{x})(y-\overline{y})}{\sqrt{\sum_{i=1}^{n}(x-\overline{x})^2(y-\overline{y})^2}}.$$

In our case x_i is the share of good i in the total exports of country X and y_i is the share of good i in the total exports of country Y. Correlation close to 1 mean that two countries are close competitors. Correlation close to 0 means that competition between countries is likely to be somewhat lower. And in most cases correlation close to –1 would mean low competition between countries. While economic structure similarity is more important for monetary integration, structural dissimilarity of exports justifies trade integration.

We see that most of the EU Member States are competitors to each other, with the correlation with the EU-28 product export structure ranging from 0.31(Luxemburg) and 0.36 (Greece) to 0.85 (Spain) and 0.92 (Germany). E. g. Greece competes mostly with Lithuania (0.86), Malta (0.83), the Netherlands (0.76) and Cyprus (0.71). The UK competes mostly with Germany (0.69), Spain (0.63), Belgium and Slovenia (0.60) and much less with Bulgaria (0.17), Greece (0.18), Luxemburg (0.19), Malta, Lithuania (0.20), Finland (0.21).

The EU faces low competition from the EFTA countries (with correlation from 0.03 with Iceland to 0.29 with Switzerland), Eastern European Association countries (from 0.00 with Ukraine to 0.33 with Georgia) and most of the Western Balkan states. But competition with Serbia (0.62) and Turkey (0.51) is substantial. There is low competition between Ukraine and the every EU Member State – the highest correlation is with Luxemburg and still it is very low (0.15).

Conclusions

1. The development of the European economy in the 21st century after the British exit from the EU will be determined by the competitiveness and intensive innovative development of the economies by implementing the «Europe 2020 Strategy» aiming to development of the knowledge economy, innovation and sustainable development, as well as by enlargement with the accession of new member countries from the Western Balkans, Ukraine, Moldova and Georgia, Iceland and other countries.

2. Enlargement slowed down after the 2008 financial crisis. But Brexit can be a precedent which can lead to shrinking of the EU economy. There are two main solutions to the Brexit crisis: more consolidated EU-27 and further enlargement. In the near future there is no country that can offset exit of the UK by means of accession. Therefore, Ukraine may offset the British exit from the EU but it will require foreign direct investment to improve the economic performance

(20–30 billion dollars annually for the period 2017–2025), which will lead to the accession to the EU in a decade.

3. The exit of UK from the EU, refugee crisis and external threats will lead to deepening of political union in the coming years: a common foreign policy, Euro-army, Europol, coast guard, the direct election of the President of the European Council and Commission, a common fiscal policy, strong development policy, cohesion policy and the creation of new EU funding programs for the Member States, the candidate and potential candidates countries.

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