Growth, Competitiveness and International Trade from the European Perspective

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Preface

Competition, competing and competitiveness are manifested both when the business operates on the domestic market and on the international market, while international competitiveness may also manifest itself vis-à-vis domestic firms that are forced to compete on the local market with foreign competitors, or even global players. This is determined. Both competition and competitiveness can be considered not only at different levels, but also due to different analytical criteria. Actors involved in this competition are businesses, transnational corporations, industries, local governments and regions, as well as states or economies. Most often, there are three analytical levels – macro, meso and micro levels. The notion of competitiveness may refer either to the assessment of the national or global economy (competitiveness of the economy, macroeconomic competitiveness), but it can also refer to the firm (competitiveness of the business, microeconomic competitiveness), as well as to the industry (competitiveness of the industry, international mesoeconomic competitiveness).

It is very crucial that the possibilities, which are created for Central and Eastern European (CEE) as well as South and East European (SEE) economies and businesses by the process of political and economic integration in the frame of the European Union (EU), became fully used. The Europeanisation processes include a wide range of behaviours from simple foreign trade transactions to undertaking independent productive activities in a host country. The Europeanisation processes resulted from the introduction of the Single European Market (SEM), which guarantees equal rights for all businesses (including small and medium-sized enterprises) in all Member States of the European Union (that means mostly the annulment of national protectionism). The European market became "local" market offering national entrepreneurs new chances and possibilities. This helps economies and businesses to grow and to be competitive.

On one hand, no doubt there is obviously a regional specifics of international trade and especially of international business and in widely recognized Central Europe including both CEE and SEE countries. On the other hand, there is a theoretical and empirical gap in the literature, thus this monographic book is a kind of the answer trying to fulfil this niche.

This monograph presents current research findings of various authors from different parts of the world making a hopefully valuable polyphonic contribution to the puzzle of international competitiveness and trade from the growth perspective in Europe, mainly the European Union.

The book consists of 11 chapters written by 14 various scholars coming from 3 different countries (Poland, Croatia, Bosnia and Herzegovina).

Tonći Lazibat
Krzysztof Wach
Blaženka Knežević

Zagreb – Kraków, July 2017

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1

From European Integration to Europeanisation: Towards Increasing Competitiveness of the European Union[1]

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Summary:

The chapter is a kind of a summary of the achievements of the European Union as the international organisation in the field of economic integration. The chapter aims at presenting the integration processes in Europe in retrospective approach from European studies on integration to Europeanisation processes in Europe and beyond. The chapters reveals the integration processes within the EU from the very new perspective in European studies, that is from the perspective of Europeanisation. The conclusions are based on the literature review and observations, and the whole chapter is mainly of a theoretical and conceptual character.

Keywords: European Union; economic integration; competitiveness; Europeanisation
JEL codes: F15

1. INTRODUCTION

The European Union faces serious challenges not only to its internal problems, but above all to its future on the international scene. These fears are not only expressed by opponents of European integration, or by sceptics who have always expressed them, but also by their supporters, which is definitely a disturbing symptom. The current image of the European Union and the challenges it is currently facing, was well captured by Giddens (2007). Does it mean that further Europeanisation is threatened? Certainly, the times in which we live and work are interesting and at the same time current times create huge challenges for modern economies and busi-

[1] This chapter is a part of research project No. 061/WE-KHZ/02/2017/S/7061 entitled "Konkurencyjność międzynarodowa w perspektywie makro, mezo i mikro" (International competitiveness from the macro, meso and micro perspectives) financed from the funds allocated to the Faculty of Economics and International Relations of the Cracow University of Economics in the framework of grants for maintaining research potential. This chapter is the modified extension of (Wach, 2012, pp. 137-183).

nesses. There are at least two reasons for such an assessment and such a state of affairs. First of all, hypererturbulence, or even the ambiguity of the environment, forces states and businesses to change traditional, conventional behaviours, which results in the need for these entities to adapt to the challenges of the modern economy. Secondly, in the world economy, the process of globalisation has been transformed into a kind of phenomenon of semiglobalisation, which according to Peng (2009, p. 20) requires the use of various strategic business experiments. Unlike Ghemawat (2007, p. 31), the semiglobal perspective helps businesses to counter the illusion of one-size-fits-all and the apocalypse on decline in economic growth. Different researchers focus their attention on the global activity they oppose the local activity, and by semiglobalisation they understand the intermediate state on the way from a local business to a global one with full economic integration on a global scale, with a very different perception of the present state.

The main objective of this chapter is to show the way that the integration theory went though from the basic concepts of integration to the Europeanisation processes and creating the Grand Europe in the modern world economy. The study is based mainly on the literature review and its critics, nevertheless to illustrate some tendencies the secondary statistics were used.

2. EUROPEAN ECONOMIC INTEGRATION AS THE ROOTS

In the discourse on the phenomenon of European economic integration or Europeanisation, the taxonomy of the conceptual apparatus is not univocal, its systematics, and sometimes the lack of it, leaves much to be desired, which from the present time perspective is emphasised by Holzinger and Schimmelfenning (2012, p. 292): "it is astonishing how poor our research and knowledge about the phenomenon is". Precise determination, and sometimes even delimitation of such related terms as Europeanisation, Europeification, EU-isation, Euroisation, Europeism, or the European integration itself has the key significance for the scientific analysis and research into the Europeanisation process.

The term integration itself may be variously formulated depending on the research perspective, e.g. integration in the management studies is something different and in economics it takes on a different meaning. The issue becomes even more complicated if we consider interdisciplinary research perspective, even with regard to the European integration itself into which the research is conducted in numerous scientific disciplines. The phenomenon is seen differently by a sociologist, a culture expert, a political scientist, and still differently by an economist. The link connecting all definitions is the significance of the term integration itself which etymologically stands for the process of creating the wholeness from individual parts and is identical with the term of consolidation or unification. From the point of view of the undertaken research topic, the main emphasis will be put on economic aspects, both in the macroeconomic and microeconomic dimension, and also, wherever it will be possible and desired, from the perspective of the management studies. From

the historical and merit point of view, Diez and Wiener (2009, p. 6-7) distinguish three phases in the development of European integration theory (Table 1).

Table 1. Three phases in integration theory

Phase	When?	Main themes	Main theoretical reference points
Explaining integration	1960s onwards	How can integration outcomes be explained? Why does European integration rake place?	Liberalism, realism, neoliberalism
Analysing governance	1980s onwards	What kind of political system is the EU? How can the political processes within the EU be described? How can the EU's regulatory policy work?	Governance, comparative politics, policy analysis
Constructing the EU	1990s onwards	How and with which social and political consequences does integration develop? How are integration and governance conceptualised? How should they be?	Social constructivism, poststructuralism, international political economy Normative political theory Gender approaches

Source: (Diez & Wiener, 2009, p. 7).

Within the scope of defining economic integration, after Jantoń-Drozdowska (1998, p. 9) we can distinguish two basic streams of views, the first of which treats integration as a form of international economic cooperation, whereas the other one defines it "as a totally new quality which has replaced the structures existing so far", but we can have an impression that with regard to the European Union the other stream, the main representative of which is Balassa (1962, p. 2) or Molle (2006, p. 4), prevails now. Integration occurring in the regional dimension is according to Pietrzyk (2009, p. 31) identified *de facto* with the phenomenon of regionalisation, and *de jure* with the phenomenon of regionalism, which are occurring now in the world economy, concurrently with globalisation. The first one stands for "more intense economic links between countries belonging to the same economic zone", and the other one concerns the institutional and instrument dimension.

On a high level of generality (*sensu largo*), Molle (2006, p. 4) understands the European economic integration as gradual elimination of economic borders between independent member states, as a result of which the economies of those states start to function as a whole. Although economic integration has far-fetching historical connotations, sometimes even of fundamental significance for the correctness of the interpretation of this phenomenon, it structuralised as a scientific notion only after the Second World War. From the methodological point of view, economic integration must be analysed applying both the dynamic approach (as a process) and the static approach (as a state) but, as Molle (2006, p. 4) emphasises, that last approach will be able to be fully applied as soon as the economic integration process goes through all its stages and achieves its goal. The issue is seen differently by Jantoń-Drozdowska (1998, p. 9) who stresses that "what results from the empirical observation is that the state of integration must be treated as a goal because achieving the total complementarity in the case of dynamic elements is not possible". An analysis

of the integration process itself and the related processes requires from the researcher a versatile grasp of this issue, and the static perspective may be highly applicable, for example in the research into the measurement of the level, stage or intensity of the European integration process (compare for example Table 2).

A significant division of regional economic integration was made by Bożyk (2008, pp. 330-331) distinguishing international and supranational integration. The result of the first one is only the limitation of exercising sovereignty by the member states (without losing it), and the integration party concentrates on the coordination of the member states' activities. On the other hand, supranational integration is related to the issuance of obligatory decisions, recommendations, decrees or directives by the institutions of a given integration party with relation to their member states.

Tinbergen (1954, p. 95) according to the integration method introduced the classification differentiating functional (negative) integration and institutional (positive) integration. The first one consists in the abolishment of barriers in the flow of the factors of production and goods, which means that integration occurs via the market mechanism. On the other hand, the other one consists in the harmonisation of the economic policy by a supranational institution (Borowiec 2011, p. 19), integration takes place here by the impact of institutional factors and the policy supporting integration. In practice, there is a third model - sectoral integration which "defines the integration only in the selected segments of economy" (Żołądkiewicz, 2012, p. 177), and the integration process begins from the branches in which it is relatively easiest and/or most beneficial.

Tinbergen (1954, p. 95) goes furthest in his views. He identifies economic integration with delegating by signatories of a specific integration formation their powers with regard to the regulations of the economic policy to the supranational centre, in the effect of which we deal with stricter international coordination and the unification of the economic policy the result of which can be the achievement of the highest stage of the integration process according to Balassa[2] – political unification in the form of federation or confederation (Table 2).

Here, we can and even should separate the political union from the full economic integration. The first one will be treated as *sensu stricto* unification of politics, and the other one will be related to one supranational politics, and they will be characterised by different means to achieve these goals (Kawecka-Wyrzykowska 1997, quoted in Bożyk 2008, p. 335). Interesting scenarios of reaching full economic integration are described by Misala (2005, pp. 457-459 quoted in Żołądkiewicz, 2012, pp. 188-190). On the one hand, he uses two models of the integration concept, the supranational and the interna-

[2] Béla Balassa (1996) distinguishes the following stages of the integration process: 1. Free trade area; 2. Customs union, 3. Common market, 4. Economic and monetary union, 5. Economic and political union (total economic integration). Another approach towards the stages of the integration process is proposed by Bożyk and Misala (2003, p. 39) mentioning its following forms: 1. Free trade zone, 2. Customs union, 3. Common market, 4. Monetary union, 5. Economic union, 6. Political union, 7. Full economic integration. They emphasize that "The economic union is characterized by a much broader scope of coordination of the economic policy in comparison with the monetary union" (Bożyk & Misala, 2003, p. 39). However, while considering the experiences of the existing debt crisis in the EU, it should be stressed that the solid fiscal union is the permanent basis for the monetary union, and the fiscal union in turn in its subjective character is a part of the economic union.

tional model mentioned before, and as the other criterion he considers economic or political factors of the realisation of the full integration concept. These are: federalism, confederalism, functionalism and neofunctionalism, which are included in the classical solutions. We should extend this catalogue by, for example, intergovernmental approach or contemporary theories of European integration, such as: institutionalism, multi-level governance or, for example, constructivism[3]. Schmitter (2004) offers a much wider classification of integration theories (Figure 1).

Table 2. Stages of economic integration in the modified approach by B. Balassa

Integration level		Characteristics	Examples of implementation
(0) Trade agreements (regional autarky)		Bilateral trade contracts	Japan (before the creation of ASEAN)
(1) Free-trade zone		as above and abolition of customs duties and quotas	EFTA, CEFTA, NAFTA, AFTA, CISFTA
(2) Customs union		as above and common external customs tariff	Mercosur, EUCU – European Union Customs Union, CUBKR, CAN – Andean Community of Nations
(3) Free market		as above and free flow of production factors	EEC/EU before the introduction of the monetary union EEA (common market without common customs tariffs),
(4) Economic and monetary union	(4a) economic union	As in stage three and harmonisation of economic policy	Benelux Economic Union (until 1957), EU (although not in full scope)
	(4b) monetary union	As in stage three and introduction of common currency and common central bank	EU to some extent: Euro-zone with European Central Bank
	(4c) fiscal union	As in stage three and harmonisation of taxes resulting in submitting tax sovereignty to the supranational level	EU to some extent
(5) Economic and political union		As above and political unification within the framework of a supranational institution	Does not occur in the contemporary world economy (pro-federal character of EU)

Source: own study based on (Crowley 2001, p. 5).

Using the same methodological assumptions with regard to the stages of economic integration and the forms of integration policy, the European integration process from the retrospective point of view can be synthetically divided into five periods, and adding a prospective perspective, extended by one more, sixth period (Table 3), which allows to treat the European Union at present as the "pro-federal" structure – a platform of the mass transfer of policies on the supranational level (Nowak & Riedel 2010, p. 222). The division of the economic integration process into stages, as Barcz, Kawecka-Wyrzykowska and Michałowska-Gorywoda (2012, p. 23) rightly observe, is purely theoretical because in practice these stages do not have to occur either separately or alternately, and very often they simply overlap. Most often, however, the stages overlap.

[3] A detailed overview of the theories and models of the European integration can be found in the work (Cini et al. 2003) whose Chapters 5-8 concern individual theories and theoretical approaches.

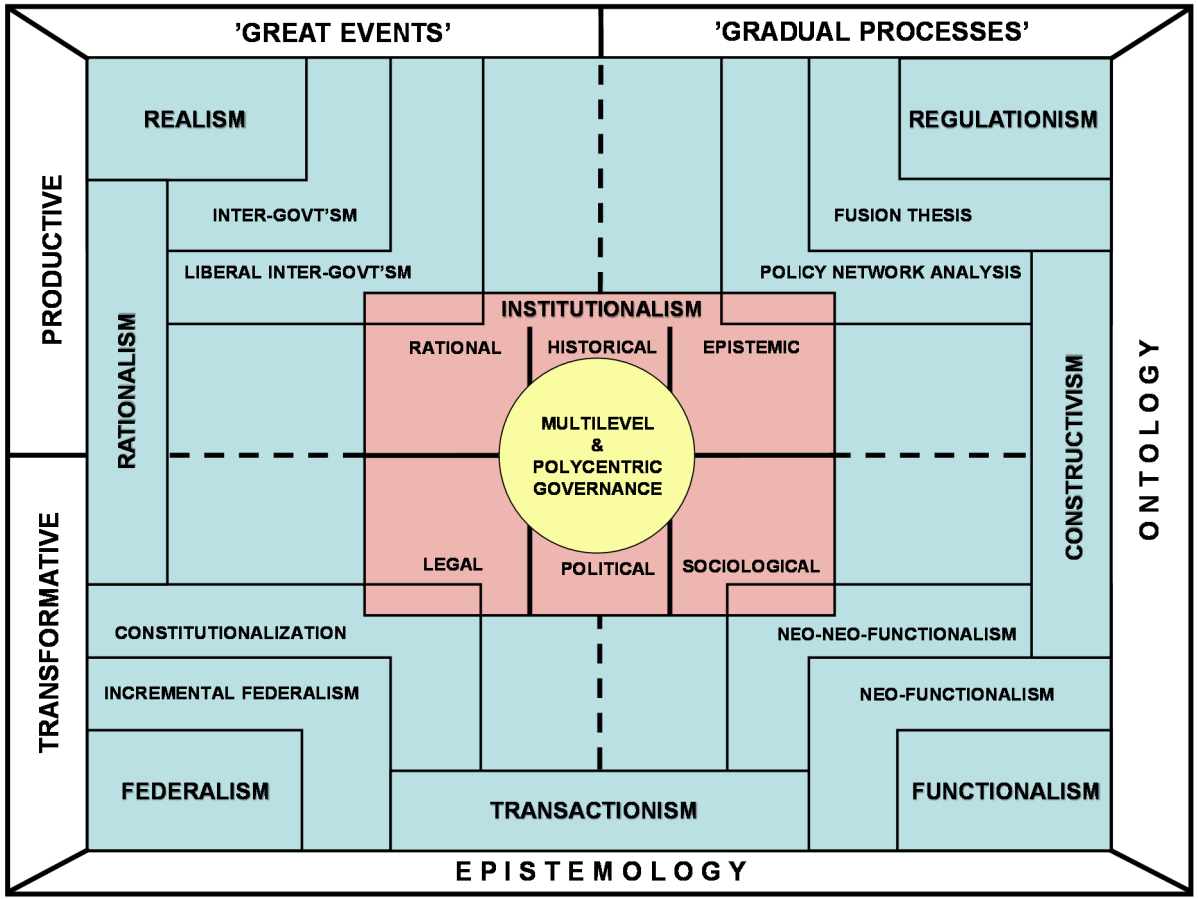

Figure 1. Main theories in economic integration according to Schmitter
Source: (Schmitter, 2004, p. 48).

Table 1. Stages of the European economic integration in the years 1945-2016

Period	General characteristics	Institutional characteristics	Economic characteristics	Territorial expansion	Integration level
1945-1957	Beginnings of the realisation of the European integration concept	Organisation for European Economic Cooperation (1948), European Coal and Steel Community (1952), European Defence Community (1952), Western European Union (1954)	Bilateral and multilateral trade agreements Common market of coal, steel and iron (within European Coal and Steel Community 1952-2002)	Various countries of Western Europe (depending on the agreement)	regional autarky Free trade zone Customs union Common market
1958-1969	Building the foundations of integration	European Economic Community (1958), European Atomic Energy Community (1958)	10-year (it was supposed to be a 12-year) period of abolition of import and export duties among the member states, from 1 July 1968 creation of common customs tariff in trade with third countries	EEC-6 (1958) founding states: - Belgium - Holland - Luxembourg - France - Italy - West Germany	Towards the free trade zone and customs union
1970-1985	strengthening of economic ties	European Free Trade Association (EFTA), so-called merger treaty: Council of Ministers, Commission of European Communities (1965), European Council (1974), from 1972 general elections to the European Parliament, from 1978 ECU within European Monetary System, Schengen Agreement I (1985),	From 12 October 1968 full freedom of the flow of workforce, liberalisation of the flow of services and capital Harmonisation of indirect taxes, progressing liberalisation of the free flow of capital and services	EEC-9 (1973): - Great Britain - Ireland - Denmark EEC-19 (1981): - Greece	customs union towards common market
1986-1991	Preparation for the creation of EU	Single European Act (1986), “Europe 1992” project	Area without internal borders, on which free flow of goods, people, services and capital is ensured (JAE, Art. 7a),	EEC-12 (1986): - Spain - Portugal EEC-12 (1990): - East Germany	Common market (homogenous European market)

Period	General characteristics	Institutional characteristics	Economic characteristics	Territorial expansion	Integration level
1992-2009	Implementation of the European Union	European Union (as a name for the European Community) with three pillars (1992), Schengen Agreement II (1995), from 2009 European Union gains personality in the international law	Since 1993 abolition of customs offices on borders, since 1994 Community Customs Code, since 1999 (2001) introduction of common currency - Euro	EU-15 (1995): - Austria - Finland - Sweden EU-25 (2004): - Czech Republic - Cyprus - Estonia - Lithuania - Latvia - Malta - Slovakia - Slovenia - Poland - Hungary UE-27 (2007): - Bulgaria - Romania	economic and monetary union: - economic union (to a great extent) - monetary union (Euro-zone) - fiscal union (partial harmonisation)
2010-2016	Preparation for the strengthening of integration	The treaty of Lisbon from 1 Dec 2009, among others High Representative in Foreign Affairs, institutionalisation of Eurogroup	Clear political impulses in the form of the calls to strengthen the policy, including the economic one	EU-28 (2013): - Croatia	Towards economic and political union
2017-	At the crossroads	?	?	Planning Brexit (EU-27?, 2019?)	?

Source: Adapted from (Wach, 2012, p.142-143).

Although an attentive observer and analyst of the current economic and political affairs can easily notice the symptoms of the coming changes in the functioning of the European Union, however, considering the historical burdens and socio-cultural factors (particularly the lack of understanding of the strategic challenges the European is facing, which are mainly used by populist social and political movements), it should be assumed that the road towards full integration is still far, and the consequences of the current economic crisis may either intensify it or impede it. The European Union on the present stage of integration, according to Pelkmans (2006), still differs from the economic federation in four aspects, namely[4]:

- political logics, even of advanced economic integration, differs from the logics of economic decentralisation in mature federations (EU vs. US),
- an advanced level of the common market requires full political acceptance in order to ensure necessary assistance activities for the remaining decentralised regions,

[4] The factors have been given based on (Pelkmans 2006, pp. 11-12, 37-38, 43-44).

– the European Union still does not have some competences typical for economic federation (it concerns tax policy understood as the right to impose taxes, defence policy and foreign policy the seeds of which are being created now),
– the European Union does not have a common government, typical for federation, the role of which is now *de facto* performed by the European Commission.

3. EUROPEANISATION PROCESSES IN CONTEMPORARY EUROPE[5]

Europeanisation, particularly after Poland's accession to the European Union, is a fashionable and commonly used phrase, however, it may be misunderstood because the term refers to numerous phenomena which are occurring now on the European continent. The research into Europeanisation goes back to 1970s although its bloom fell to the last decade of 20th century and is continued now, which is proven by the bibliometric analyses on this[6]. We should agree with Dyson's opinion (2002, p. 3) that in the literature of the subject there is not a scientifically stringent definition of Europeanisation which still remains a relatively "theoretical interest and has produced more questions than answers".

Holzhacker and Haverland (2006, pp. 1-18) distinguish three waves which in fact constitute three generations of European studies (studies into European integration), the result of which is the formation of a separate, structured theoretical and conceptual framework for Europeanisation as an arising separate research field. We can apply at least three research approaches to the Europeanisation process (Figure 2). The first one is the bottom-up approach, the second one is the top-down approach, whereas the third one is the cycle/circular approach.

Moravcsik, Sandholtz and Kohler-Koch are regarded the main precursors of the Europeanisation concept. Their concepts were established in the European integration theory and fell to 1990s. The first of them, being a representative of the stream of intergovernmentalism[7] within the regional integration theory, is considered to be the author of the bottom-up or downloading approach explaining an influence of the integration processes on individual countries (Moravicsik, 1994).
On the other hand, Sandholtz's views in this respect were even of adversative character in comparison with Moravicsik's views. In his opinion, integration creates new opportunities for domestic entities, resulting in institutional changes and the changes in shaping and conducting individual policies. The solution bases on the multi-governemntalism concept[8] and is identical with the top-down or uploading approach (Sandholt, 1996, pp. 403-429).

The third parallel concept, developed Kohler-Koch (1996, pp. 359-380), is based on the idea of the transformation of governance. Not only does integration contribute to a multi-level distribution of the impact but also to the removal of

[5] For details please read (Wach, 2014c; 2015; 2016a).
[6] The results of the bibliometric analysis of the circulation of the Europeanisation terms in the scientific literature are discussed, among others, in the works (Featherstone, 2003, pp. 5-6; Exadaktylos & Radaelli, 2009, pp. 514-516).
[7] It concerns the concept of liberal intergovernmentalism by Moravcsik.
[8] It concerns the model of multi-level governance (MLG).

borders between the public and the private sphere, and in consequence of these changes an evolutionary transformation takes place.

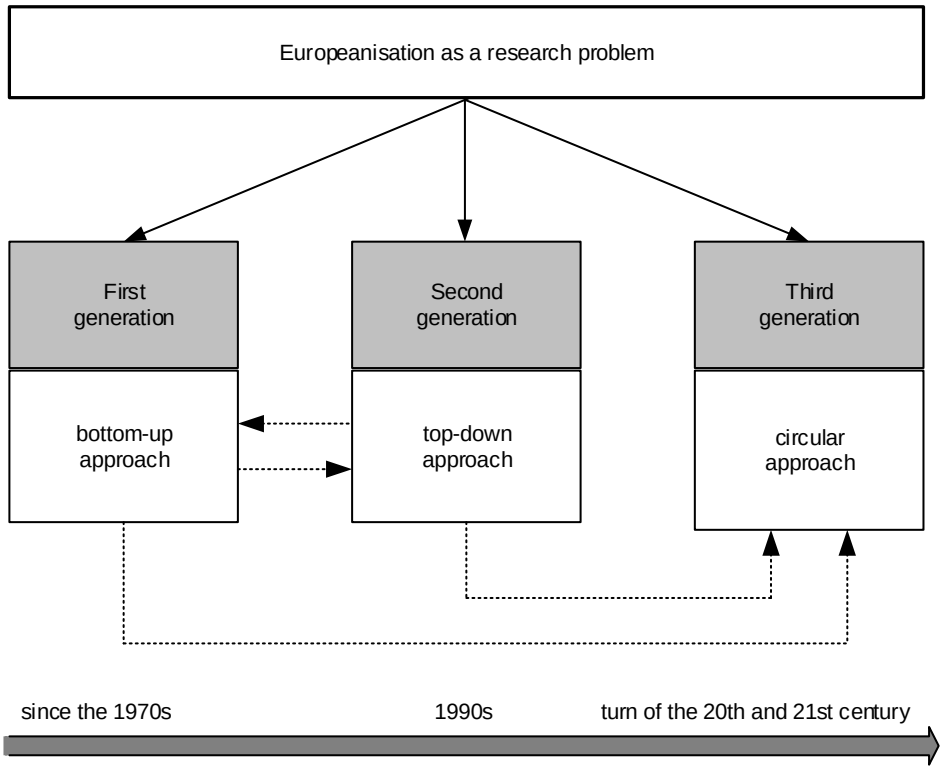

Figure 2. Research approaches to the Europeanisation process from the temporary perspective
Source: (Wach, 2016, p. 20).

When ordering the concepts of Europeanisation chronologically, we should mention two more persons here. In mid-1990s, Ladrech (1999, pp. 69-88) provided one of the first acknowledged definitions of Europeanisations, and Radaelli (1997, pp. 553-575), is regarded one of the major conceptuologists and propagators of the research into Europeanisation, along with figures such as Börzel, or Risse (Börzel, Risse 2000; Green-Clowes, Risse et al. 2000). Radaelli (2000) is an author of the definition of Europeanisation coming from late-1990s which is the most commonly used right now. Their contribution will be discussed in detail in the next parts of the deliberations.

After a few years of his own studies and analyses, in 2002 Olsen asked a question what exactly Europeanisation is and whether this concept is scientifically useful[9]. After a decade from posing this question for the first time it still remains open, and the forming literature on that is clearly fragmentary. We can assume that creating the scientific bases of Europeanisation was an answer to the common use of this term, namely, *de*

[9] What is meant here is the work (Olsen 2002, p. 922) although he asked these questions as early as in mid-1990s, among others, in the works like (Olsen 1995) which a year later came out in print as (Olsen 1996, pp. 245-285).

facto the methodology of empiricism (of empirical school) was adopted here from management studies. Thus, the concept of Europeanisation in the literature of the subject is defined as "a phenomenon without origin" (Gellner & Smith, 1996, pp. 357-370).

An analysis of scientific studies devoted to that issue allows to adopt a very general definition of Europeanisation, constructed as a real definition. Europeanisation, let us call it *ex definitione,* according to Dyson (2002, p. 3) is "a process unfolding over time and through complex interactive variables it provides contradictory, divergent and contingent effects". It should be emphasised that it is a very general definition of Europeanisation, even of a generic character, not indicating planes of the impact of Europeanisation (so little precision is a flaw of this definition). Its generality, however, can be treated as an advantage, because it gives a possibility of an application for the needs of almost all scientific disciplines. Similarly, Flockhart (2010, p. 788) defines Europeanisation as a dynamic, multi-form process of the diffusion of European thought, procedures and customs in time and space. According to this Author, the Europeanisation process has strong historical connotations, especially sociological ones, the manifestation of which was a revocation in the project of the Constitutional Treaty to the origins of the European civilisation, its cultural, religious and humanistic heritage of the Roman Empire, Greek Empire or the Enlightenment (European Convention 2003). Flockhart (2010, p. 795), while making the periodisation of the Europeanisation process over the centuries, distinguishes its five stages:

1. the period before 1450: the period of European self-realisation,
2. the years 1450-1700: the period of proto-Europeanisation,
3. the years 1700-1919: the period of incipient Europeanisation,
4. the period after 1919: the period of contemporary inward Europeanisation,
5. the period after 1945: the period of contemporary outward Europeanisation, identified *explicite* with EU-isation.

Nowadays, the term of Europeanisation more and more often refers to the European Union itself rather than to Europe, or the European civilisation, which constitutes distortion of the etymology of this term, thus, some authors postulate to separate Europeanisation and EU-isation, however, the great majority of researchers apply those terms interchangeably or, which happens more commonly, only the first term is used. For example, Ladrech (1999, p. 71) treats Europeanisation as "an incremental process reorienting the direction and shape of politics to the degree that EC political and economic dynamics become part of the organisational logic of national politics and policy-making", *nota bene* it is one of the first acknowledged definitions of Europeanisation. Similarly, Börzel (1999, p. 574) interprets the phenomenon as "a process by which domestic policy areas become increasingly subject to European policy-making". Bulmer and Burch (2001, p. 73) treat Europeanisation very similarly as a set of processes through which political, social and economic dynamics of the European Union displays interactions with the logics of national discourse, national identity, domestic political structures and domestic public politicians. This last definition *de facto* combines two definitions, as it uses the bottom-up and the top-down mechanism.

As Wallance (2000, pp. 369-382) rightly postulates, in order to avoid an open constrain and ahistorical conceptualisation of the Europeanisation process, we should introduce the term of EU-isation for the processes which concern the European Union only[10]. Thus, EU-isation concerns the European process related to the institutional dimension of the European Union, both on the community level and on the level of the member states, manifested mainly in the transfer of institutional and organisational procedures and policies (Flockhart 2010, p. 791). EU-isation understood in this way is a small but significant section of a much broader Europeanisation process, being, in addition to Americanisation, a particular case of occidentalisation (westernisation) (Nelson 1973, pp. 79-105). It seems to be reasonable to adopt the view of Bulmer and Lequesne (2001, p. 10) who prove on the basis of their own analysis of the scientific discourse undertaking the subject of Europeanisation that the term refers now mainly to the study of the impact of the European Union on its member states, but they emphasise that EU-isation would be a better term here if not "the horrific sound" of this neologism. To conclude, EU-isation will be perceived as the influence of multi-form Europeanisation processes with regard to the European Union, both in the endo- and exogenous dimensions, and thus it will be treated as a specific form of Europeanisation.

In the context of the conducted discussion it seems that the term of Europeification[11], also rather rarely used, creates much bigger methodological and semantic problems. Soysal (1993, p. 179) understands it as a process of gradual transnationalisation and standardisation via consensual institutional activeness generating common discourse or common ventures which are justified and presented by domestic and international experts, bureaucrats, scientists, or by the interested public opinion itself. However, it should be stressed that in the literature of the subject, Europeification understood this way is also identified with Europeanisation. For example, Delanty and Rumford (2005, p. 8) treat Europeanisation as processes which refer to the formation of the relations of a "new-state society", especially the nature of mutual dependencies of individual communities. According to them, the transnational approach in the research into Europeanisation results in the formation of post-national identity and loyalty.

Lawton (1999, pp. 91-112) represents a different approach. Based on the principles of antagonistic analysis, he defines Europeification as *de facto* division of power between national governments and the European Union as a supranational body, unlike Europeanisation which he treats *de jure* as a transfer of sovereignty from the level of the member states to the community level. His understanding of Europeification is

[10] Humanists rightly postulate the separation of those terms, however, in applied social sciences the question is not discussed. The term of Europeanisation is in its bloom, which is directly connected with the growing role of the European Union on the international arena, and the term of Europeanisation itself is now undergoing the same transformations that the term of Americanisation used to undergo. Just like an American and Americanisation etymologically refer to the whole continent, or even two – the North and the South America, in practice the terms are identified with the United States of North America (even among humanists themselves). At present. Europeanisation, and recently even an a European or European, more and more often refer to the European Union itself. Therefore, we can be tempted to say that it is an effect of the Darwinian theory of evolutionism according to which the strongest player dominates a given population.

[11] Etymologically, Europeification comes from two Latin words: *Europa* and *facio* (I do). Semantically, -fication is the last element of compound words meaning making, doing, producing something. Literary, the term should be probably explained as "becoming European".

identical with the Europeanisation concept discussed before, based on the model of multi-level governance in the aspect of European integration. The literature of the subject is not univocal here and it is difficult to give the proper meaning of this term.

Thus, starting from the social theory of transnationalism, we might identify Europeification with only one dimension of Europeanisation – the sociological one. In this book, Europeification, as a special form of Europeanisation, will be understood as an evolutionary process of the formation of the European identity, manifested in deterritorialisation[12] and creation of the common socio-cultural-political space in the supranational – EU dimension, closely connected with the perception of its identity seen from the angle of a European Union citizen.

The term of Europeanisation is tightly linked to the idea of Europeism which can be defined as a set of integration processes in the continental scale, programmed and shaped by science, ethics, and mainly by metapolitics. According to the Europeism concept, no European country can effectively undertake reasonable political activities without considering the interests of other European states. Therefore, the prosperity of Europe depends on the process of integration of European countries by appointing common legal, economic and political institutions the effect of which will be an authentic political union. The term of Europeanism has also another, pejorative meaning which is raised by broadly understood Euro-sceptics. For example, Klaus (2006) identifies Europeanism with the cancer of European socialism.

On the other hand, a related 19th century idea of pan-Europeanism, whose main propagator was Coudenhove-Kalergi (1926; 2000), was manifested in the strive for the unification of the European continent countries politically and economically. It was propagated after the First and the Second World War, and postulated the creation of the United States of Europe. Of course, from the contemporary point of view it is a historical stream, however, undoubtedly it has influenced the shape of integration processes on the European continent over the last 50 years (Ehs, 2008, pp. 23-39).

On the other hand, the literature of marketing uses the term of pan-Europeanism which refers to the Eurocentric strategy and is manifested in treating European countries, and sometimes the markets of European countries, as a market characterised by a high degree of convergence, and thus, the application of the identical Pan-European marketing strategy (Jakubowski, 1995, p. 20).

Coming to an end of this kind of definiendum of Europeanisation and related terms, we should also provide the meaning of Euroisation which means unilateral adoption of the Euro by a given country to replace its national currency (Riedel, 2016, pp. 89-97). So far, unilateral Euroisation has been made by two countries, mainly Montenegro and Kosovo[13]. In addition, three countries, Vatican, San Marino and Monaco, opted for bilateral Euroisation, that is in agreement with the European Central Bank[14].

[12] Deterritorialisation means that distances or borders in the geographical sense stop being important.

[13] The countries neither belong to the Eurosystem nor have influence on the monetary policy conducted by the European Central Bank. Based on their unilateral decision on the domestic market they use banknotes and coins issued in the Euro-zone countries.

[14] The countries do not have any influence either on the monetary policy or on the functioning of the Eurosystem or the Eurogroup. Pursuant to a bilateral agreement, they can only mint their own Euro coins.

To sum up, Europeanisation is definitely an ambiguous term, variously perceived and analysed from different points of view. Currently, it is among eagerly undertaken research problems although it is still poorly structured. This is where a need to attempt to conceptualise, and especially operationalise it comes from. In the research using deterministic models Europeanisation can be perceived both as a dependent and independent variable, which is undoubtedly directly connected with the perspective of the undertaken research and the research objective itself. In this book, Europeanisation will be chiefly discussed as an explained variable but it will be also treated as a predictor, namely an explanatory variable. The above overview of the terms has enabled the deterministic identification of their mutual relationships, which constitutes a basis for further detailed discussion on the economic Europeanisation.

4. EUROPEANISATION AND INTERNATIONAL COMPETITIVENESS OF THE EU

Europeanisation as a (scientific) term refers to several phenomena that are currently on the European continent. Europeanisation including both non-economic (political issues, e.g. Riedel, 2015; educational issues, e.g. Rybkowski, 2013; Marona & Głuszak, 2014; Wach, 2014a; agricultural and environmental issues, e.g. Urbaniec, 2014, 2015) and economic dimensions (macroeconomic issues, e.g. Janus & Stanek, 2015; 2016; mesoeconomic issues, e.g Ulbrych, 2016; Pach-Gurgul, 2016; microeconomic issues, e.g. Brzozowski, 2016; or managerial issues, e.g. Wach, 2014b, 2014d; 2016b). This concept is in fact used to describe changes in many dimensions of life, including geographical, sociological, political, legal, institutional, or economic ones (macro-, meso-, microeconomic levels).

Europeanisation in the geopolitical dimension is the creation of "Grand Europe", unified and playing an important political role in the world. In this dimension, Europeanisation ultimately grasps the European Union as a fully separate entity of the international law, resembling federation, and taking into account the concepts of Europeism or Pan-Europeism, occurring at least since the 19th century, perhaps one day even in the form of federation[15]. In this context, it is worth mentioning that at present the European Union is at the meeting point of the last two theoretical stages of economic integration, and when comparing its competences with the United States of North America, we can be tempted to claim that in some areas harmonisation or sometimes even unification is much more advanced in the EU (Table 4).

The geopolitical dimension of Europeanisation is closely connected with economic Europeanisation, especially in the macroeconomic dimension. Europeanisation in the economic dimension can be also perceived in the multifaceted way, but we can distinguish three generic planes here. Europeanisation in the macroeconomic transcendental (exogenous) dimension is creating of Europe (and more specifically

[15] In 2012 various EU politicians representing different European nations more and more boldly start to talk about the need to transform the EU into federation. An example may be a vision of the President of the European Commission, Jose Manuel Barroso, presented on 12 September 2012, that the EU has to keep integrating and become the democratic federation of the states. Due to the current political crisis in the EU such declaration has been slowed down.

Table 4. Comparison of the single economic space of the EU and the USA

The EU	The US
Legal framework	
1. Free movement of goods and services with some limitations on the movement of capital and labour. 2. Mutual recognition of technical regulations with selective harmonisation of regulations. 3. Member states use of state aids controlled by Commission. 4. Most public procurement contracts open to EU-wide competition but not in areas connected to strategic defence. 5. Governance of company law and financial law regulation of companies subject to complex interaction between national government and EU institutions.	1. Free movement of goods, services, capital and labour. 2. Technical regulations of goods and services vary across the states. 3. States are free to use state aids without federal interference. 4. States may restrict state procurement to companies based in the state. 5. Federal procurement contracts (including defence equipment) open to US-wide competition. 6. Company law and financial regulation of companies largely governed by federal law with no legal restrictions on pan-US companies.
Taxation frameworks	
1. Attempts to harmonise taxation of sales and savings. 2. Systems to prevent difference in sales taxes from distorting trade. 3. Shoppers for personal use pay sales tax (VAT and excise duties) in the place of purchase.	1. States free to set taxes on sales, income and savings. 2. No system to prevent differences in sales taxes distorting trade. 3. Buyers from re-sale inputs for other products and personal use pay sales tax in place of purchase – incentive to buy in low tax states.
Economic and social policies	
1. EU economic and social policies that seek to enhance effective free movement and promote a socially cohesive and environmentally sustainable economic system. 2. In many areas member states permitted to have higher standards than the minimum set by EU. 3. Important funds available to help poorer regions and identified social groups but no competence in health, education or housing.	1. States can adopt their own approach to many economic and social policies – a tendency towards a market-based approach. 2. Many aspects of employment and working conditions and of environmental policy decided by the sates as are policies to help poorer regions and social groups. 3. Federal laws and policies strong on equal opportunities, health, some aspects of environmental policy and some areas connected to education and housing.
Macroeconomic policy framework	
1. Common monetary policy and a single currency for Euroland countries. 2. Some controls on fiscal policy via the *Growth and Stability Pact.* 3. No automatic transfer via EU tax/expenditure systems to member states suffering from asymmetric shocks.	1. Common monetary policy and a single currency to all states. 2. No controls of state fiscal policies – states can therefore amend fiscal policy to help to adjust to asymmetric shocks. 3. Automatic transfer via federal tax/expenditure systems to states suffering from asymmetric shocks.
Political frameworks	
1. Implementation, monitoring and enforcement of EU laws and policies largely depends on national governments. 2. The EU does not have its own monitoring and enforcement agencies. 3. Lack of well-defined EU based political system (e.g. no European political parties) and complex interaction between EU institutions and national government agencies to make and modify EU laws and policies.	1. Implementation, monitoring and enforcement of federal laws and policies is largely done by federal agencies and state laws and policies by state agencies. 2. Well-defined political system to make and amend law and policies – political parties are national and are organised at both federal and state level into a coherent system.

Source: adapted and shortened from (Harris & McDonald, 2004, pp. 31-34).

of the European Union) a significant economic centre in the world, identified with the intensification of its role, at least within the previously existing Triad (the United States – the European Union – Japan), although with aspirations to perform the major role in the world economy, particularly as a response to the globalisation processes, including the growing significance of China or India in the world economy.

Both above mentioned dimensions of Europeanisation, mainly based on mainly making the European Union great in the world (Grand Europe) are connected roughly with international competitiveness. Both competition and competitiveness can be discussed not only on various levels, but also according to various analytical criteria. Bossak and Bieńkowski (2004, p. 17) emphasize that "entities participating in the rivalry are both individuals conducting business activity, domestic firms, transnational corporations (TNCs), as well as nations and self-governments or regions". Most frequently, just like in case of internationalisation or other economic phenomena, three analytical levels are assumed – the macro, meso and micro one. The notion of competitiveness may refer both to the assessment of the national or global economy (competitiveness of economies, macro-competitiveness), but it may also refer to a firm (competitiveness of a firm, micro-competitiveness) (Wach, 2014e, p. 104).

One of the visible aspects of international competitiveness of economies is a share in international trade, especially exports (Table 5). At present, the share of the EU in the world economy is bigger than of the US or Japan and constitutes $^1/_5$ of the global trade (and considering the intercommunity turnover among the member states it is as much as 34.2%), whereas the EU foreign direct investment constitutes almost a half of global direct investment (Eurochambers 2008). It is worth stressing that as early as in 2010 China became the main exporter of telecommunications equipment (USD 180 billion, with the annual dynamics of growth of over 400%), and thus for the first time it outran the European Union (EU-27), making of it the main re-exporter of such equipment (WTO 2011, p. 55). In spite of the continuing crisis, in 2010 the export of the financial services in the EU-27 increased by 3% and constitutes 49% of the global trade of these services (USD 130 billion) (WTO 2011, p. 139).

Table 5. The share of the European Union in the international trade in 1970-2016 against the world's major exporters (in %)

Year / Economy	1970	1980	1990	2000	2010	2016
China	0.7	0.9	1.8	3.9	10.3	13.1
Japan	6.1	6.4	8.2	7.4	5.0	4.0
United States	13.6	11.0	11.2	12.1	8.3	9.1
EU-28	46.8	41.5	44.7	38.0	33.9	33.7

*For EU-28 the data for all 28 present member states were calculated, in spite of the fact that in the analysed years they were not the EU members. However, not considering them would disturb the data analysis. Both intra-community and extra-community export was taken into account, which was dictated by the availability of the data.
Source: own compilations and calculations based on (UNCTADStat, 2017).

Export competitiveness reflects the development of a country's exports relative to its top 20 trading partners. Export competitiveness is measured as the ratio of

a country's market share in the reference group in 2015 over that in 2012. Positive values indicate that the country is becoming more competitive with respect to its partners (UNCTAD 2017, p. 26). The latest data shows that there is a strong increase (more than 5%) as for the change of export competitiveness in top 20 markets in the years 2012-2015 for all EU particular economies (Figure 3).

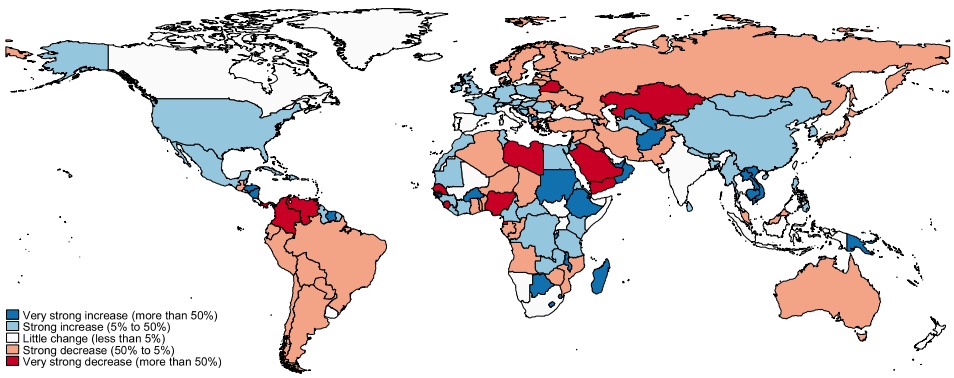

Figure 3. Change of export competitiveness in top 20 markets in the years 2012-2015
Source: (UNCTAD 2017, p. 26).

4. CONCLUSIONS

Currently the European Union is at the crossroads, and must face many challenges like the inflow of immigration from the Middle East and Northern Africa, but also internal problems like Brexit (Pera, 2017). Thus, there are a lot of challenges for the European integration and Europeanisation processes. Europeanisation in the macroeconomic dimension can not only be, but is, as a consequence of semiglobalisation, a kind of response to the processes of globalisation. One can also look at this issue through another prism. Semiglobalisation can also be a response to permanent changes in the environment causing immediate and sometimes even anticipatory adaptation to market needs.

The European Union, as well as the whole of Europe, is now facing major global challenges, which primarily concern economic issues. As Hemerling, Sirkin and Bhattacharya (2008) predict in their famous book *Globality: Competing With Anyone, Everywhere* that future European, American and Japanese companies will compete not only with each other, but also with highly competitive Chinese, Indian, South American and even African ones, which no one at present can imagine (Kotler & Caslione 2009, p. 29). The forecasts that predict that by 2030 developing and emerging countries will reach 60% of world GDP, can radically change the global configuration, so it can be assumed that the European Union and the processes of Europeanisation are now at a crossroads. Not only is the close prognosis for the next two decades (the possible consequences of such a reconfiguration will be felt much sooner), but the current situation in which the United States and the European Union are, both show that there is an urgent need to redefine and to make a strategic

reconfiguration as well as to apply counter-supportive actions in favour of European businesses and European economies (or even the European economy).

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2

Economic Growth versus Socio-Economic Development of the European Union Countries: The Scale of Divergence and Diversification[1]

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Summary:

The terms economic growth and development can be considered as one of the most important concepts in economic sciences. What is more, these concepts are of interest to the public, politicians and researchers of different disciplines. The paper aims at presenting issues of economic growth and socio-economic development in theory and practice on the basis of the European Union countries. Based on the theory, the paper presents an overview of terminology associated with economic growth and socio-economic development. It also characterizes the correspondence between these categories. The measures use for evaluating of socio – economic development are: Sustainable Development Index (SDI), Socio – Economic Development Index (SEDI). The economic growth is determined by GDP per capita. The methodology adopted in the work is the analysis and synthesis of the available literature on the subject, as well as a comparative analysis of applied measures: GDP per capita, SDI and SEDI. The period of analysis covers years 2004 – 2014. The analysis of socio-economic growth and development of the European Union countries reveals that the scale of differentiation of the analysed economies is very high for all adopted measures. There is still a division of the EU on the "old" and "new" member states, where the definite leaders are countries that have been long functioning in the EU. The exceptions to this are Italy, Spain, Portugal and Greece. A special case is Greece, which records a regression of all tested measures, and at the moment it can be considered as the country at the lowest level of socio-economic development. There are no significant differences between the measures defining economic growth and measures presenting socio-economic development.

Keywords: economic growth; socio-economic development; divergence; diversification; European Union
JEL codes: F43; F50: F63

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1. INTRODUCTION

The aim of the study is to present the issues of economic growth and socio-economic development in theory and practice. Based on the theory, the paper presents an overview and synthesis of terminology associated with economic growth and socio-economic development. It also characterizes the correspondence between these categories. The possible measures of growth and socio-economic development are then outlined. The study presents the results of a comparative analysis of three measures: GDP per capita, Sustainable Development Index (SDI), Socio-Economic Development Index (SEDI) for the EU countries over the period 2004-2014. The aim of the empirical research is to identify the scale of differentiation of the EU countries with regard to the selected measures, and then an attempt to determine the correspondence between them. The methodology adopted in the work is the analysis and synthesis of the available literature on the subject, as well as a comparative analysis of applied measures: GDP per capita, SDI and SEDI. The period of analysis covers the period 2004-2014. The comparative study does not include Croatia, therefore it relates to the EU-27. This country was omitted at this stage of the study because it was not recognized in the Socio-Economic Development Index (SEDI).

2. ECONOMIC GROWTH, SOCIO-ECONOMIC DEVELOPMENT AND RELATED TERMINOLOGY – CONCEPTUAL ANALYSIS

The terms economic growth and development can be considered as one of the most important concepts in economic sciences. The frequency of their use can indicate that that they are clear and definite, and therefore require no explanation. However, in practice these terms are – mistakenly – used as synonyms. In addition, there are a number of concepts associated with economic growth and development, such as: social development, sustainable development, welfare, etc. Therefore it is necessary to clarify and adjust the identified terms.

Economic growth is understood as an increase in productive capacity of the national economy or as an increase in the value of goods and services produced in a given period. This means that it is a quantitative category, which is formulated as an increase in real Gross National Product (GNP) (Niedziółka, 2011). Economic growth means changes involving an increase in the economy as a whole, resulting from the changes occurring in its component elements (Woźniak, 2008). The literature mentions positive, negative and zero economic growth (Hess, 2013; Haller, 2012). Positive economic growth occurs when the average annual growth of macroeconomic indicators (e.g. GDP) is higher than the average rate of population growth. Negative economic growth means the opposite. The growth rate of macroeconomic indicators balanced with the rate of population growth is referred to as zero economic growth (Haller, 2012). There is also extensive and intensive growth (Wawrosz & Mihola, 2013). The extensive economic growth occurs when the number of production factors: raw materials, labour, increases with minimal changes in the productivity of these factors. As a result, this leads to the consumption of natural

resources, physical capital and labour, which causes depletion of growth potential. Intensive economic growth is based on a variety of innovations and modernizations that lead to increased productivity and eliminate barriers to extensive growth (Wawrosz, Mihola, 2013). Economic growth is a narrower term than economic development, which is understood not only as quantitative changes, but also qualitative changes in the economy. It is a process of multi-dimensional structural changes which result in the reorganization of the whole economic system. Therefore, it applies to changes in generating and institutional capacities, economic relations, production, consumption and natural environment. According to Obrębski (2006), property, structure of the national economy, mechanism of its action, environment, quality and quantity of goods and services, as well as their division – are essential components for economic development. Economic growth is therefore a necessary, but not the only, condition for economic development.

What is of key importance is also social development. This applies to changes taking place directly in the structure and preferences of a given society. Social development determines the change in shape of social relations, criteria and rules of conduct in a given society. This also applies to changes in behaviour patterns, attitudes and awareness, which are aimed at improving the coexistence of people and determining their involvement in the economy management processes (Wach, 2015). As can be seen, this category is closely linked to economic development, since social development depends on the availability of the effects of economic development (Sen, 1999; Trabold-Nubler, 1991; Rantanen, Pawlak, & Toikko, 2015). In the context of economic growth and development, social development is the broadest concept, which includes two categories. One can also use the concept of socio-economic development, which means a combination of quantitative and qualitative changes that occur in the economy**.** Socio-economic progress can result in changes in production potential, consumption, social relations and the environment (Ginevičius, Gedvilaitė & Bruzgė, 2015). The end result of these changes is a higher standard of living and welfare.

The recently proposed concept of development for the future is the idea of sustainable development. In 1987, the report of the World Commission on Environment and Development "*Our common future*" presented assumptions of the strategy of sustainable development. The report also contains the most popularized definition of that development. It says that it is a development that meets current needs but does not eliminate the ability of future generations (Report of the World Commission on Environment and Development, 1991). This concept integrates three dimensions of modern economic development: social, economic and ecological. This means a completely new concept of development and vision of society, rational use of resources, reduction of material consumption, implementation of clean and cost-efficient technologies, resulting in the creation of a new economic order (Urbaniec, 2015).

Economic development is not an end in itself and its occurrence consistently contributes to improving the welfare and quality of life. Welfare is understood as a state of complete satisfaction of material and spiritual needs of the individual and the society. Marciniak (2005) believes that in a market economy the general welfare is the

sum of economic and social welfare. This dichotomy is justified by the factors mentioned below, which directly determine the social and economic welfare. According to the author, the essential determinants of economic welfare are: (i) stabilization of the economy, (ii) sustainable conditions for economic growth, (iii) structural changes, (iv) development with regard to the aspects of ecology, (v) correcting the distribution of wealth. The elements that determine social welfare are: (i) freedom of speech, press, criticism, the choice of worldview, (ii) ensuring justice for all citizens before the law, (iii) internal security. As stated by Marciniak (2005), the basis of social welfare is economic welfare, which determines implementation of the first. On the other hand, social welfare is an important complement to economic welfare.

Quality of life, as defined by the European Union, can be seen through the prism of three dimensions: objective and subjective. Objective dimension, that is synthetic assessment, consists of health, education, work, financial situation, natural conditions, etc. On the other hand, subjective dimension is the degree of satisfaction, awareness of one's situation and well-being (Quality of life. Facts and views, 2015).

3. METHODS OF MEASURING ECONOMIC GROWTH AND DEVELOPMENT

Measures of economic growth are derived from the System of National Account standard (SNA) which includes, among others: gross domestic product (GDP), gross national product (GNP). Global recognition of these values for the whole economy is an indication of economic activity of the country and its economic potential. These indicators can also be expressed per capita which aims at presenting the average level of a given measure in order to perform, for instance, international comparisons or comparisons over time. However, it does not account for differences in the distribution of this indicator. GDP is a monetary measure of goods generated by the productive factors located within the territory of the country, regardless of who owns them (Woźniak, 2008). Therefore, this measure includes the value of all goods and services which were created in the country in a given period of time (e.g. within one year). GNP is, in turn, a measure of the value of all goods and services that were produced in a given time by national factors of production, regardless of their location. The more commonly used measure is GDP or GDP per capita. These measures recognise the quantitative changes in the economy, which is a good reflection of economic growth. There is a number of works which use this measure as some kind of indicator of economic welfare which, however, is not the right approach. Furthermore, it is noted that for the time being, under the influence of increasing globalization, and consequently the relocation of production, it is difficult to locate the place where GDP is generated in individual countries (Malaga, 2009). In addition, it puts forward a number of other restrictions on the use of this measure, such as: (i) the assumption of a uniform distribution of income with GDP per capita, which means that it does not take into account the problem of inequality, (ii) the omission of non-market activities, e.g. activities conducted by citizens in their own households, etc. (iii) not taking into account the negative impact of economic growth on the environment. In

the context of the use of GDP per capita as an indicator of welfare, it can be added that this measure does not include a number of non-economic factors, which are largely reflected in the perception of citizens' living conditions. These are: stress, social relationships, monotony, a sense of stability, security, etc. (Johann, 2005).

Individuals who criticise these measures created a number of new measures, whose objective is to quantify economic welfare. They can therefore be regarded as some kind of measure of socio-economic development. An example of such an approach is a Measure of Economic Welfare (MEW) by Nordhaus and Tobin (1972). The new measure introduced an adjustment to gross domestic product at three levels. Firstly, the costs included in the product were re-classified and divided into three categories: consumption, investment and intermediate goods. Secondly, the measure of economic welfare takes into account the value of capital services, leisure time and non-market activities. Thirdly, it also takes into account the costs incurred in connection with the negative effects of urbanization, which translate into living conditions, e.g. pollution (Bleys, 2005).

Another modification of the welfare measure is a Measure of Net National Welfare (NNW). This measure includes the following elements: government consumption, private consumption *i*n the *strict sense*, consumer goods and services, the value of free time. In addition, the measure is encumbered with the costs incurred as a result of environmental degradation and expenditures for its protection, as well as costs arising from urbanization. Modification of the measure developed by Nordhaus and Tobin made by the measure of net national welfare consists primarily in the fact that the expenditure incurred on health and education, which MEW treats as an investment, is classified as consumption. In addition, the NNW also includes a different valuation of free time and costs associated with the degradation of nature and urbanization (NNW Measurement Committee, 1974).

Another method for quantification of welfare based on the national account system, belonging to monetary measures, was presented by Zolotas (1981). It is an Index of Economic Aspects of Welfare (EAW). The starting point for the calculation of this measure is not a product but individual consumption. As the name suggests, it is a measure constructed by covering a wide range of factors – added or subtracted aspects, depending on whether they have a positive or negative impact on the economic welfare. Negative impact is formed by the costs of degradation of natural resources, rapid growth of the social costs of pollution, commuting and expenditure on health and education. On the other hand, the following elements have a positive impact: the value of public buildings, the value of manufacturing of consumer goods, the value of free time, the value of activities conducted by citizens in their own households, public sector services in relation to expenditure on education and health (Borys, 1999). Compared to measures based on the gross domestic product, EAW focuses more on the costs associated with the destruction of natural environment. It is believed to be the first measure of welfare that covers a wide range of environmental matters.

A more perfect indicator based on private consumption weighted by a factor of social inequality seems to be the Index of Sustainable Economic Welfare (ISEW) by Daly and Cobb (1989). This measure recognizes the broadest range of factors

that contribute to the economic welfare both in terms of costs and revenues. Elements that increase the index of sustainable economic welfare are: the value of household activity, the value of manufacturing of consumer goods as well as roads and motorways. In addition, it also takes into account expenses related to education and health care, an increase in net capital and balance sheet of investments abroad and foreign investments in the country. On the other hand, elements that decrease the value of the index of sustainable economic welfare are expenses related to health and education, advertising, urbanization, road accidents and pollution. It also takes into account expenses related to consumer goods, losses caused by long-term changes in the environment, depletion of natural resources (Borys, 1999). The measure introduced by Daly and Cobb is the first measure of welfare that takes into account the principle of sustainable development.

International organizations, government agencies and foundations conduct research on economic and social development, as well as the level and quality of life for the purpose of international comparisons. The most popular study prepared annually by the United Nations Development Programme (UNDP) is a report on the state of social development, which uses the Human Development Index (HDI). The use of this index is very common, and its introduction was intended to draw attention to non-economic factors that shape the generally understood category of welfare. However, it does not sufficiently take into account economic factors. HDI is a synthetic measure based on average of measures which represent three spheres of human life (United Nation Development Programme, 2015): (i) health (life expectancy expressed by the average duration of human life), (ii) education (the average number of years of education received by people ages 25 and older, and the expected years of schooling for children entering the education process), (iii) material conditions (national income per capita in USD, calculated according to purchasing power parity (PPP$).

4. ECONOMIC GROWTH AND SOCIO-ECONOMIC DEVELOPMENT IN THE EUROPEAN UNION COUNTRIES IN THE YEARS 2004-2014 – RESULTS OF THE STUDY

The study on growth and development of the EU countries was conducted using the following measures: GDP per capita, Sustainable Development Index (SDI) and Socio – Economic Development Index (SEDI). GDP per capita is a widely accepted measure of economic growth. Sustainable Development Index and Socio – Economic Development Index are aggregate measures constructed using taxonomic methods. They were used in studies of Głodowska (2016, 2017). A detailed description of the methodology for constructing taxonomic indexes can be found in the works of Hellwig (1967, 1968), Wydymus (1984), Zeliaś (2000), Bąk (2016). The basis for these measures is the construction of an aggregate index based on the selected diagnostic variables that describe the areas reflecting the studied phenomenon. The following paper concerns broadly defined socio-economic development, whereas SDI and SEDI differ in terms of the applied diagnostic variables. A detailed description of the variables used in the study is presented in Table 1.

Table 1. The variables used in the analysis

Index	Variables
GDP	GDP per capita
SDI	real GDP per capita, resource productivity, people at risk of poverty or social exclusion, employment rate of older workers, life expectancy, greenhouse gas emissions (in CO2 equivalent), primary energy consumption, energy dependence, share of renewable energy in gross final energy consumption.
SEDI	infant mortality rate, available beds in hospitals, available doctors, fertility rate, old dependency ratio, population between 25-64 with tertiary educational attainment, early leavers from education and training, total R&D expenditure (as %GDP), participation rate in education and training – people between 24-64, persons employed in science and technology, exports of high technology products, unemployment rate, net earnings, GDP per person employed, unemployment rate with tertiary education, net national disposable income, net saving, final consumption expenditure of households, food consumption expenditure, passenger cars, density of road network, internet users, mobile phone subscriptions, CO2 emissions, alcoholic beverages, tobacco and narcotics consumption expenditure, crude marriage rate, deaths from assaults, homicide, annual cinema trips per capita, recreation and culture expenditure, books, newspapers expenditure, restaurant and hotels expenditure.

Source: own work on the basis of Głodowska (2016, 2017).

Table 2 shows GDP per capita of the EU countries over the period 2004-2014. This value is expressed in purchasing power standards (PPS), thereby taking into account the differences in price levels between countries. Table 3 shows the Sustainable Development Index and table 4 shows the Socio-Economic Development Index. These indices are within the range [0,1]. The less the values of measurement differ from the unity, the more a given object is developed due to the analysed area. These measures were also presented for the period 2004-2014.

In the years 2004-2014, GDP per capita in the European Union ranged from 7 500 PPS to 73 500 PPS. This means that in the country with the lowest GDP per capita the value of this index accounted for only 10% of the GDP per capita of the country with the highest level of this measure. Countries where GDP per capita is the lowest are Romania and Bulgaria, and then Lithuania, Latvia, Poland, Slovakia. The country in which this measure achieved the highest value is primarily Luxembourg. The economy of Luxembourg is characterized by a very high value of GDP per capita, exceeding the average value of the EU by 65%. After 2009 Luxembourg showed the largest growth rates of GDP per capita. The difference between GDP per capita in Luxembourg and the value of GDP per capita in another country of the EU, where this measure is the highest, is approximately 30 000 PPS. This means that the level of GDP per capita in Luxembourg is 94% higher than in the country that has the second highest value of this indicator in the European Union. This difference compared to the average for the entire European Union stands at 170%. In relation to this country, differences in GDP per capita are very high. In general, based on the coefficient of variation one can assess the variation in GDP per capita in the EU countries as quite large or moderate. Until 2014, there was a slow decrease in the divergence of the coefficient of variation. The high standard deviations indicate that the values are widely scattered around the average value. There is

a right-sided asymmetry of the distribution, which means that the value of GDP per capita in most of the analysed countries is below the average.

Table 2. GDP per capita in the European Union countries in years 2004-2014 (PPS)

Country / year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Austria	27 600	28 100	29 700	30 900	31 100	29 500	30 900	32 300	33 100	33 200	35 600
Belgium	26 200	26 900	27 800	28 900	28 900	27 600	29 400	30 200	30 700	30 500	33 000
Bulgaria	7 500	8 200	9 000	10 000	10 900	10 300	10 800	11 700	12 100	12 000	12 800
Croatia	12 500	13 200	14 100	15 600	16 200	14 900	14 700	15 200	15 600	15 600	16 100
Cyprus	19 600	20 800	22 000	23 500	24 800	23 400	23 600	23 500	23 400	22 100	22 400
Czech Republic	16 900	17 800	18 900	20 600	20 200	19 400	19 700	20 300	20 700	20 600	23 800
Denmark	27 100	27 700	29 300	30 600	31 100	28 900	31 200	31 500	32 100	32 100	35 100
Estonia	12 400	13 800	15 600	17 500	17 200	14 900	15 800	17 300	18 300	18 800	20 900
Finland	25 100	25 700	26 900	29 300	29 700	26 900	27 900	29 100	29 400	28 700	30 300
France	23 700	24 700	25 500	26 900	26 700	25 500	26 600	27 400	27 700	27 800	29 500
Germany	25 000	26 000	27 300	28 800	29 000	26 900	29 200	30 800	31 500	32 000	34 600
Greece	20 300	20 400	21 800	22 600	23 200	22 300	21 600	20 300	19 500	19 200	19 400
Hungary	13 600	14 200	14 900	15 300	15 900	15 300	16 100	16 900	17 000	17 200	18 700
Ireland	30 800	32 400	34 400	36 500	32 900	30 100	31 400	32 300	32 900	32 500	37 700
Italy	23 100	23 600	24 700	26 000	26 000	24 300	25 100	25 500	25 600	25 200	26 600
Latvia	10 100	11 100	12 500	14 300	14 600	12 700	13 500	15 000	16 400	17 300	17 500
Lithuania	11 100	12 300	13 600	15 500	16 100	13 600	15 100	16 900	18 300	19 100	20 700
Luxembourg	54 500	57 000	63 800	68 400	65 800	59 200	64 000	66 700	67 100	67 900	73 500
Malta	17 200	18 000	18 600	19 600	20 300	19 800	21 300	21 600	22 100	22 700	24 600
Netherlands	27 900	29 300	31 000	33 000	33 500	31 000	31 700	32 500	32 500	32 600	36 000
Poland	10 900	11 500	12 300	13 600	14 100	14 200	15 400	16 400	17 100	17 500	18 600
Portugal	16 700	17 900	18 700	19 600	19 500	18 800	19 600	19 300	19 400	19 400	21 100
Romania	7 500	8 000	9 200	10 700	12 200	11 700	12 400	12 900	13 600	13 900	15 300
Slovakia	12 300	13 500	14 900	16 900	18 100	17 000	18 100	18 900	19 400	19 600	21 300
Slovenia	18 700	19 600	20 700	22 100	22 700	20 200	20 600	21 200	21 400	21 300	22 800
Spain	21 900	22 900	24 800	26 200	25 900	24 200	24 200	24 300	24 400	24 500	24 700
Sweden	27 300	27 300	29 000	31 200	30 900	28 200	30 200	31 400	32 200	32 700	34 100
United Kingdom	26 900	27 800	28 900	29 400	28 600	26 300	26 300	26 400	26 600	27 200	29 900
Descriptive Statistics											
Standard deviation	9 631.0	9 851.3	10 731.8	11 239.6	10 530.5	9 498.2	10 222.2	10 526.0	10 494.9	10 555.0	11 573.1
Mean average	20 514	21 418	22 854	24 411	24 504	22 754	23 800	24 564	25 004	25 114	27 021
Median	27 250	27 950	29 300	30 150	29 850	27 900	28 600	29 350	29 850	30 200	32 750
Max	54 500	57 000	63 800	68 400	65 800	59 200	64 000	66 700	67 100	67 900	73 500
Min	7 500	8 000	9 000	10 000	10 900	10 300	10 800	11 700	12 100	12 000	12 800
Coefficient of variation	46.9	46.0	47.0	46.0	43.0	41.7	43.0	42.9	42.0	42.0	42.8
Coefficient of skewness	1.5	1.6	2.0	2.2	2.2	2.0	2.2	2.4	2.4	2.5	2.4

Source: own work based on Eurostat Database.

Table 3. Sustainable Development Index in the European Union countries in years 2004-2014

Country/year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Austria	0.240	0.224	0.237	0.267	0.328	0.342	0.282	0.275	0.298	0.269	0.294
Belgium	0.225	0.250	0.259	0.275	0.278	0.274	0.224	0.229	0.292	0.272	0.278
Bulgaria	0.002	0.004	0.003	0.015	0.092	0.115	0.097	0.043	0.037	0.074	0.048
Croatia	0.174	0.175	0.167	0.135	0.166	0.150	0.154	0.150	0.155	0.135	0.158
Cyprus	0.097	0.068	0.078	0.063	0.036	0.038	0.057	0.039	0.061	0.086	0.087
Czech Republic	0.190	0.182	0.191	0.192	0.255	0.246	0.203	0.208	0.228	0.212	0.220
Denmark	0.440	0.374	0.369	0.401	0.494	0.517	0.452	0.421	0.507	0.487	0.516
Estonia	0.221	0.235	0.255	0.196	0.274	0.288	0.183	0.185	0.192	0.145	0.139
Finland	0.239	0.236	0.250	0.285	0.400	0.406	0.315	0.287	0.331	0.320	0.340
France	0.326	0.320	0.307	0.318	0.360	0.342	0.311	0.299	0.317	0.287	0.285
Germany	0.248	0.257	0.252	0.309	0.343	0.341	0.303	0.327	0.330	0.296	0.321
Greece	0.221	0.210	0.215	0.205	0.228	0.192	0.142	0.131	0.135	0.117	0.096
Hungary	0.102	0.080	0.073	0.064	0.052	0.021	0.020	0.168	0.185	0.165	0.160
Ireland	0.187	0.166	0.158	0.121	0.181	0.235	0.210	0.291	0.276	0.255	0.256
Italy	0.204	0.205	0.183	0.180	0.240	0.241	0.221	0.206	0.231	0.227	0.222
Latvia	0.100	0.110	0.126	0.139	0.187	0.153	0.128	0.176	0.184	0.173	0.204
Lithuania	0.125	0.175	0.178	0.145	0.191	0.208	0.186	0.210	0.223	0.196	0.203
Luxembourg	0.220	0.210	0.249	0.284	0.324	0.345	0.305	0.244	0.290	0.312	0.355
Malta	0.102	0.152	0.132	0.126	0.077	0.117	0.086	0.067	0.059	0.067	0.082
Netherlands	0.354	0.348	0.355	0.367	0.419	0.428	0.365	0.334	0.367	0.352	0.403
Poland	0.110	0.087	0.108	0.121	0.131	0.122	0.084	0.081	0.123	0.119	0.155
Portugal	0.195	0.204	0.197	0.219	0.251	0.242	0.244	0.247	0.247	0.203	0.217
Romania	0.090	0.117	0.121	0.146	0.155	0.154	0.133	0.076	0.089	0.088	0.110
Slovakia	0.098	0.097	0.157	0.183	0.209	0.226	0.205	0.184	0.240	0.215	0.233
Slovenia	0.231	0.224	0.232	0.219	0.177	0.223	0.183	0.085	0.103	0.101	0.156
Spain	0.160	0.134	0.128	0.142	0.222	0.253	0.208	0.205	0.179	0.193	0.186
Sweden	0.415	0.435	0.484	0.472	0.546	0.560	0.473	0.465	0.485	0.492	0.506
United Kingdom	0.258	0.233	0.208	0.202	0.259	0.283	0.253	0.276	0.287	0.296	0.330
Descriptive Statistics											
Standard Deviation	0.101	0.096	0.099	0.105	0.125	0.128	0.110	0.107	0.117	0.112	0.119
Mean average	0.199	0.197	0.203	0.207	0.245	0.252	0.215	0.211	0.230	0.220	0.234
Median	0.199	0.205	0.194	0.194	0.234	0.242	0.206	0.207	0.229	0.208	0.218
Max	0.440	0.435	0.484	0.472	0.546	0.560	0.473	0.465	0.507	0.492	0.516
Min	0.002	0.004	0.003	0.015	0.036	0.021	0.020	0.039	0.037	0.067	0.048
Coefficient of variation	50.50	48.90	49.10	50.90	50.90	50.90	50.90	50.90	50.90	50.90	50.90
Coefficient of skewness	0.605	0.451	0.712	0.608	0.534	0.502	0.546	0.348	0.471	0.807	0.740

Source: own work based on Głodowska (2016).

In the years 2004-2014, the value of synthetic measure of sustainable development ranged on the average from 0.027 to 0.490. In the first year of the analysis, the difference between the highest and the lowest values was 0.438, and 0.468 in the last year. Countries where the values of this measure were the highest in the entire analysed period are: Sweden, Denmark, Finland, the Netherlands, France and Germany. Countries with the lowest level of SDI in the analysed period are: Bulgaria, Cyprus, Malta, Hungary, Poland and Romania. The coefficient of variation confirms the relatively large differences of this measure among the EU countries.

This trend continues throughout the period considered. The standard deviation, in turn, indicates that the values are concentrated around the average value. Throughout the period there is a positive asymmetry, proving that most of the studied traits have values below the average measure.

Table 4. Socio-Economic Development Index for the European Union countries in years 2004-2014

Country/year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Austria	0.444	0.426	0.426	0.381	0.387	0.418	0.447	0.503	0.468	0.462	0.405
Belgium	0.387	0.366	0.354	0.323	0.320	0.351	0.372	0.389	0.368	0.356	0.330
Bulgaria	0.037	0.057	0.063	0.041	0.057	0.072	0.067	0.087	0.062	0.075	0.075
Cyprus	0.264	0.257	0.249	0.225	0.216	0.228	0.254	0.260	0.215	0.195	0.160
Czech Republic	0.261	0.259	0.259	0.244	0.243	0.257	0.256	0.282	0.249	0.241	0.212
Denmark	0.448	0.442	0.440	0.403	0.406	0.426	0.432	0.475	0.439	0.424	0.374
Estonia	0.191	0.201	0.221	0.197	0.174	0.148	0.160	0.260	0.249	0.256	0.237
Finland	0.419	0.413	0.407	0.374	0.388	0.410	0.427	0.492	0.433	0.397	0.318
France	0.377	0.359	0.350	0.318	0.323	0.348	0.361	0.391	0.374	0.389	0.383
Germany	0.369	0.335	0.330	0.311	0.322	0.358	0.382	0.424	0.408	0.411	0.374
Greece	0.183	0.170	0.160	0.136	0.136	0.153	0.135	0.097	0.067	0.059	0.023
Hungary	0.220	0.200	0.193	0.157	0.153	0.167	0.166	0.183	0.165	0.156	0.142
Ireland	0.406	0.418	0.417	0.373	0.345	0.319	0.337	0.375	0.348	0.357	0.277
Italy	0.272	0.246	0.246	0.227	0.219	0.234	0.242	0.181	0.234	0.214	0.188
Latvia	0.104	0.115	0.129	0.133	0.126	0.056	0.056	0.012	0.102	0.127	0.136
Lithuania	0.084	0.104	0.109	0.115	0.101	0.082	0.096	0.249	0.170	0.182	0.175
Luxembourg	0.374	0.356	0.339	0.317	0.292	0.309	0.355	0.457	0.362	0.349	0.313
Malta	0.337	0.326	0.331	0.280	0.278	0.300	0.303	0.404	0.323	0.302	0.295
Netherlands	0.452	0.436	0.448	0.412	0.410	0.431	0.443	0.471	0.450	0.430	0.379
Poland	0.097	0.082	0.085	0.100	0.112	0.161	0.180	0.205	0.189	0.183	0.185
Portugal	0.199	0.174	0.149	0.115	0.113	0.138	0.153	0.181	0.144	0.131	0.117
Romania	0.041	0.043	0.051	0.043	0.022	0.006	0.009	0.009	0.022	0.032	0.026
Slovakia	0.153	0.132	0.136	0.132	0.137	0.183	0.197	0.249	0.198	0.196	0.182
Slovenia	0.265	0.239	0.253	0.224	0.228	0.244	0.249	0.282	0.255	0.242	0.239
Spain	0.266	0.276	0.258	0.225	0.172	0.169	0.188	0.189	0.164	0.157	0.108
Sweden	0.402	0.389	0.389	0.369	0.377	0.392	0.418	0.462	0.429	0.428	0.367
United Kingdom	0.433	0.431	0.430	0.382	0.378	0.381	0.376	0.419	0.374	0.364	0.314
Descriptive Statistics											
Standard deviation	0.133	0.128	0.126	0.115	0.117	0.126	0.132	0.149	0.133	0.128	0.114
Mean average	0.277	0.269	0.267	0.243	0.238	0.250	0.261	0.296	0.269	0.264	0.235
Median	0.266	0.259	0.258	0.227	0.228	0.244	0.254	0.282	0.249	0.242	0.237
Max	0.452	0.442	0.448	0.412	0.410	0.431	0.447	0.503	0.468	0.462	0.405
Min	0.037	0.043	0.051	0.041	0.022	0.006	0.009	0.009	0.022	0.032	0.023
Coefficient of variation	48.1	47.8	47.3	47.5	49.2	50.5	50.3	50.4	49.4	48.6	48.8
Coefficient of skewness	-0.342	-0.227	-0.163	-0.148	-0.063	-0.167	-0.193	-0.334	-0.150	-0.097	-0.203

Source: Own work based on Głodowska (2017).

The measure of socio-economic development of the EU countries in the years 2004-2014 stood at 0.027-0.444. These values are similar to those of the SDI. The coefficient of variation SEDI indicates a moderate diversification of the EU countries in terms of socio-economic development. The left-sided asymmetry indicates that most countries achieved values above the EU average. Countries where the level of SEDI is the highest are: Austria, the Netherlands, Sweden, Finland, Denmark, United Kingdom, Germany. This trend continues throughout the entire period. The lowest values of SEDI are found in countries such as: Romania, Bulgaria, Lithuania Latvia and Poland. It can be stated that the Scandinavian countries, the Netherlands, Germany, Austria and Great Britain have the highest levels of development, taking into account socio-economic development and sustainable development. Scandinavian countries are the definite leaders. In case of the poorest countries, there is no repeatability of their composition, considering the two measures used. The low levels of SDI in Malta and Cyprus have not been confirmed by the measure of socio-economic development, where the SEDI values for these countries were at an average level. The average annual level of SEDI allowed to put Malta on the 12th place, and Cyprus on the 15th place among the EU countries. This means that these countries are characterized by an average level of socio-economic development and a relatively low level of sustainable development. This may be determined by environmental factors which constitute essential components of SDI. Countries such as Romania, Bulgaria and Poland are characterized by the lowest values of SDI and SEDI, which means that they are at the lowest level of development among the EU countries. In the case of Poland, one can see a large growth rate of SEDI. However, this trend is not to be seen in the measure of sustainable development. A similar situation can be seen in Bulgaria, but the measures of SDI and SEDI are much lower compared to Poland. In Romania there is a visible decline in values of SEDI compared to the initial year, which shows a socio-economic crisis. An interesting case is that of the southern European countries, where a dramatic drop in values of SEDI is also observed. This is most evident for Greece, where this measure is the lowest among the EU countries. This means a significant deterioration of the country's socio-economic situation.

Figure 1 shows the general trend in the formation of three measures included in the study: GDP per capita, SDI and SEDI for the EU as a whole. The range between the minimum and maximum values is quite large in the case of each adopted measure. This confirms the wide diversity of EU countries in terms of economic growth, socio-economic development and sustainable development. In the case of SEDI and SDI, the average value corresponds to the median value. Therefore, these values clearly indicate central values. Taking into account GDP per capita, the arithmetic average has a value lower than the median. European Union includes countries which have a very low GDP per capita that deviates from other EU countries, which undoubtedly had an impact on the formation of central measures. The chart on GDP per capita shows a downward trend from 2007 to 2009, which was related to the economic crisis. This is not as evident in the case of the other two measures. One can observe a relationship by comparing the values of GDP per capita and SDI. The GDP growth

rate works on the dynamics of SDI with some delay. In the early years of the analysis up until 2007, one can observe an increase in the level of GDP per capita. The increase in SDI can be observed from 2007. The collapse of GDP per capita in the period 2007-2009 is reflected in the level of SDI after 2009. This dependence cannot be seen in the relationship of GDP per capita and SEDI.

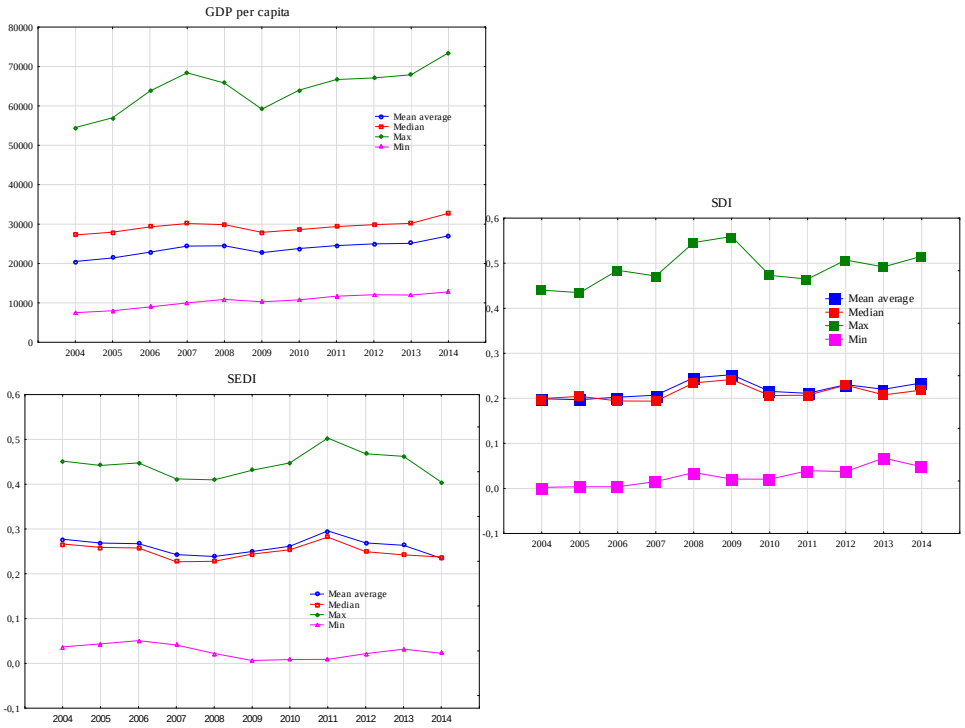

Figure 1. GDP per capita, SDI and SEDI for the European Union in years 2004-2014 (max, min, average value, median)
Source: own work based on Eurostat and Głodowska (2016, 2017).

Figure 2 shows the positions of the EU countries, taking into account the three analysed areas: economic growth, socio-economic development and sustainable development. Comparison of countries in terms of these measures identifies three groups of countries:

GROUP 1: Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Ireland, Luxemburg, Netherland, Sweden.

GROUP 2: Cyprus, Czech Republic, Estonia, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Spain.

GROUP 3: Bulgaria, Greece, Romania.

The first group is made up of the most developed countries in the European Union. They are characterized by high levels of GDP per capita and other

measures. The leaders are primarily Scandinavian countries. Luxembourg has the highest GDP per capita, however, it acquires lower positions in terms of socio-economic indices. The second group is dominated by countries that joined the EU in 2004, along with three of the so-called "old members": Italy, Spain and Portugal. These countries can be described as moderately developed. GDP per capita in these countries is at a level below the EU average. However, it is characterized by higher dynamics than the first group. The second group also includes Malta, although it achieved a relatively high level of the Socio-Economic Development Index. It is a country where the level of socio-economic development is higher than in other countries of that group. On the other hand, the country achieved a very low value of SDI. The third group is made up of countries at the lowest level of economic growth and socio-economic development.

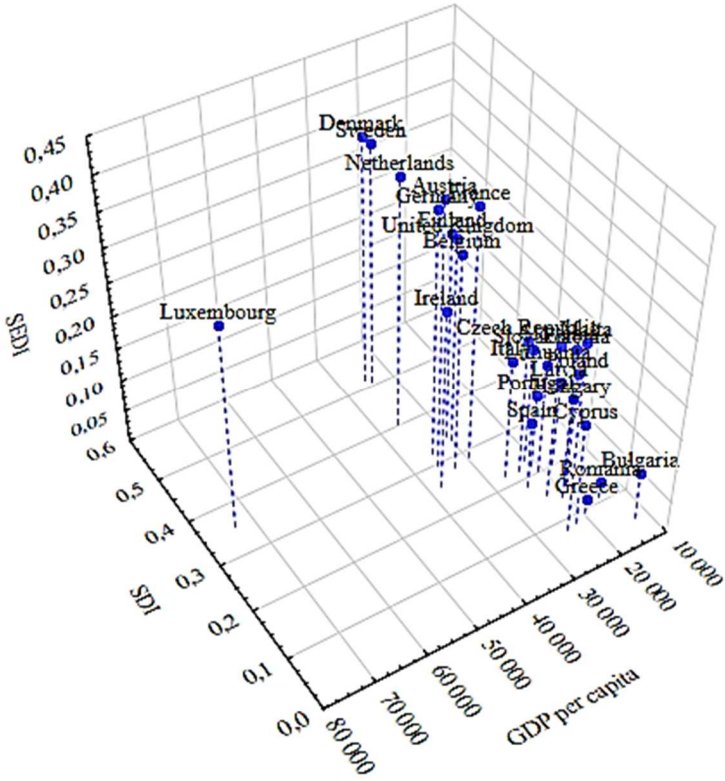

Figure 2. GDP per capita, SDI and SEDI for the European Union countries in 2014
Source: Own work based on Eurostat and Głodowska (2016, 2017).

5. CONCLUSIONS

There is a long-standing scientific discussion on the economic growth and development, but the irregularity in applying the measures of economic growth in the form of GDP per capita is increasingly articulated as a reflection of qualitative

changes in the economy. Furthermore, it is noted that the presence of upward tendency is clearly insufficient for the socio-economic development. The review of research on socio-economic growth and development shows that there are many concepts associated with this terminology. Growth and development is not an end in itself, and it should contribute to the welfare and improvement of the level and quality of life. The analysis of socio-economic growth and development of the European Union countries revealed that the scale of differentiation of the analysed economies is very high for all adopted measures. There is still a division of the EU on the "old" and "new" member states, where the definite leaders are countries that have been long functioning in the EU. The exceptions to this are Italy, Spain, Portugal and Greece. A special case is Greece, which recorded a regression of all tested measures, and at the moment it can be considered as the country at the lowest level of socio-economic development. There are no significant differences between the measures defining economic growth and measures presenting socio-economic development. The richest countries are characterized by high values of all of the adopted measures. Scandinavian countries are the definite leaders. It might be said that economic growth works on the sustainable development with some delay. However, this conclusion should be treated with a large distance. There is no doubt that the study was limited by adopting a relatively short period of research.

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3

Diversification of the External Balance of the EU Countries[1]

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Summary:

The paper aims to make a diagnosis of the external balance of the EU countries. This diagnosis was conducted on the grounds of data analysis of the balance of their payments and net international investment position of these countries. A series of measures which determine a level of their financial stability were implemented. In order to appropriately rank the European Union countries based on the state of their external balance, the standardised sum method was applied. As a result, it was found that the new EU Member States in the analysed period were characterised by a permanently lower level of their financial stability.

Keywords: balance of payments; current account; exports; external debt; financial openness; net international investment position; reserve assets
JEL codes: F32, F34, F36

1. INTRODUCTION

The state of external balance of an individual country means the steady-state of its balance of payments. In formal terms the balance of payments is always balanced. The current and capital account balances are determined by relations of a given economy with other countries while the financial account specifies how they are financed. The variance between these balances is adjusted by changes made in the reserve assets and the balance of net errors and omissions. This approach to the balance of payments lets to keep the accounting balance, but it does not convey any information on that whether a given country found it difficult to obtain them and how it is achieved. This is of utter importance for the economy because the balance

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of payments determines whether this country has difficulties to achieve it or its payment position is good. The occurrence of such difficulties may have a significant impact on the economic standing of a given country and in the long term on the rate and structure of its economic growth. It may also make this country run into debts towards foreign countries, which in turn may entail a series of hard-to-predict economic and political consequences (Kamecki, Sołdaczuk, & Sierpiński, 1971). Therefore, it is assumed that the external balance can be reached when the current and capital accounts are balanced with no pressure to change the state of external exchange reserves and sustainable flows in the financial account.

The analysis on the external balance should take into account the level of economic development of a given country and the dynamics of its growth which may require to import savings from abroad. In this case it is relevant to make such acquired financial means invest into productive enterprises which let to repay obligations in the further time (NBP, 2016).

2. FINANCIAL OPENNESS OF THE EU COUNTRIES

The EU countries – taking into consideration their economies – are characterised by a varied level of their international financial integration. In order to measure this level, the following financial openness indicator developed by P. Lane and G. Milesi-Ferretti (2003) can be applied which represents a ratio of the total foreign assets and liabilities in relation to individual country's GDP. In 2015 in this scope Luxembourg was the dominant player in the euro area group; its total foreign assets and liabilities exceeded the value of its GDP by more than 370-times (Table 1). The forefront was also occupied by Malta, Ireland, Cyprus and the Netherlands, for which this multiplicity was within 20 and 50. Meanwhile, in Lithuania and Slovakia the value of foreign assets and liabilities accounted for no more than twice their GDP in 2015. In the group of countries beyond the euro area the United Kingdom had the highest level of financial openness with the value of eternal assets and liabilities more than 10 times higher than its GDP. In this group the indicator reached its lowest levels (below 2) in Poland and Romania.

Within 2004-2015 a level of international financial integration of all the European Union countries increased. To the highest extent it affected Malta, Cyprus, Slovenia and Hungary where the average annual growth of their financial openness indicator exceeded 10%. It should be noted, however, that the process of financial internationalisation in the EU countries was halted by the outbreak of the crisis. On the basis of Table 2 it can be concluded that the rapid growth of financial openness occurred in 2004-2009; in Cyprus and Malta on average it grew by more than 40% while in Slovakia the rate of change did not exceed 4%. Then, in 2009-2015 the rate of financial integration clearly lost its momentum; in many cases there was a reversal in its direction – the ratio of foreign assets and liabilities to GDP fell, which took place especially in case of the United Kingdom and Romania. Among the EU countries, only Luxembourg and Slovakia saw the higher average annual growth of their financial openness indicator in 2009-2015 compared to 2004-2009. It results from the suspension of investment

decisions or their implementation to a smaller scale due to the weakened economic growth in many regions of the world, including in the EU, and the debt crisis in some countries within the euro area (Błaszczuk-Zawiła, 2013).

Table 1. Financial openness indicator of the EU countries, 2004-2015

Country	2004	2010	2015	Country	2004	2010	2015
Austria	4.57	5.54	5.22	Italy	2.01	2.68	3.13
Belgium	7.11	9.79	9.13	Latvia	1.76	3.27	3.16
Bulgaria	1.49	2.26	2.33	Lithuania	0.97	1.79	1.72
Croatia	1.40	2.02	2.19	Luxembourg	182.23	243.32	372.71
Cyprus	4.53	26.80	27.34	Malta	7.33	52.50	50.47
Czech Republic	1.28	1.90	2.32	Netherlands	12.63	17.83	21.94
Denmark	3.63	5.00	5.55	Poland	0.97	1.53	1.62
Estonia	2.29	3.13	3.18	Portugal	3.75	4.91	4.78
Finland	3.72	6.30	6.70	Romania	0.83	1.50	1.25
France	3.78	5.85	6.05	Slovakia	1.90	1.90	1.98
Germany	3.17	4.82	4.72	Slovenia	0.66	2.33	2.51
Greece	1.77	3.08	4.13	Spain	2.55	3.37	3.98
Hungary	1.75	5.81	5.61	Sweden	3.89	5.48	5.76
Ireland	22.40	34.17	39.20	United Kingdom	7.84	13.20	10.73

Source: own elaboration from (IMF, 2017a, 2017b) databases.

Table 2. The average annual rate of change in the financial openness of the EU countries, 2004-2015 (%)

Country	2004-2009	2009-2015	2004-2015	Country	2004-2009	2009-2015	2004-2015
Austria	4.20	-1.23	1.20	Italy	5.94	2.58	4.09
Belgium	6.84	-1.34	2.30	Latvia	10.49	1.43	5.45
Bulgaria	8.35	0.72	4.12	Lithuania	12.41	-0.15	5.37
Croatia	6.91	1.95	4.17	Luxembourg	5.17	8.03	6.72
Cyprus	41.95	0.79	17.76	Malta	46.90	0.12	19.18
Czech Republic	6.86	4.42	5.53	Netherlands	6.08	4.38	5.15
Denmark	5.30	2.81	3.93	Poland	6.08	3.75	4.80
Estonia	7.31	-0.36	3.05	Portugal	5.37	-0.30	2.24
Finland	7.79	3.63	5.50	Romania	10.72	-1.75	3.74
France	8.78	0.83	4.37	Slovakia	0.09	0.64	0.39
Germany	4.88	2.71	3.69	Slovenia	28.77	1.27	12.96
Greece	11.82	4.91	8.00	Spain	6.16	2.42	4.10
Hungary	27.56	-0.91	11.14	Sweden	7.98	0.15	3.64
Ireland	6.94	3.81	5.22	United Kingdom	9.02	-1.95	2.89

Source: own elaboration from (IMF, 2017a, 2017b) databases.

As previously noted, the increasing level of foreign assets and liabilities was a catalyst of the growth of their financial openness. For most EU countries in the 2004-2015 period the growth of their liabilities exceeded the increase in their assets (Figure 1). In case of the euro area countries it could be seen especially in Slovenia, Portugal and Slovakia, and in the countries beyond the euro area – in Romania, Croatia and Poland, where within 2004-2015 their increase in the value of foreign liabilities was more than double than their increase in foreign assets.

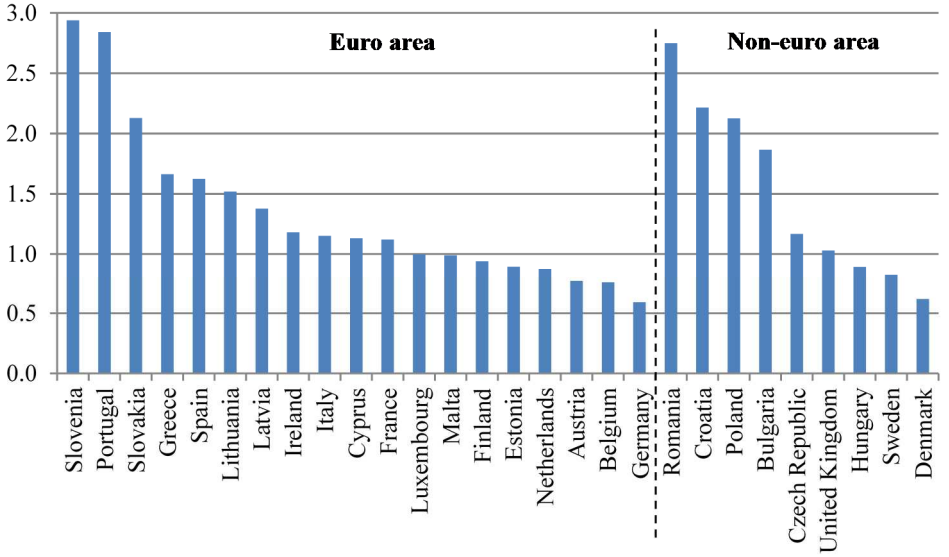

Figure 1. The ratio of changes in the value of external liabilities to changes in the value of external assets in EU countries, 2004-2015
Source: own elaboration from (IMF, 2017a) databases.

Therefore, this phenomenon relates primarily, though not only, to the new EU Member States. In view of the shortage of their own savings, they finance the development of their economies making use of foreign savings (Bilewicz, & Nakonieczna-Kisiel, 2016). Surplus of their foreign liabilities over foreign assets results in negative net international investment position indicating that they are net debtors in relation to foreign countries. It is closely linked with the formation of their current account balance. Deficit on the current account in a given year, and especially its perpetuation in subsequent years, leads to the deterioration of a given country's international investment position (Janicka, 2016).

At the end of 2015, most European Union countries were characterised by their negative net international investment position. In case of Ireland its value reached up to 208% of GDP (Figure 2). However, only some of these countries had also deficit on their current account, which resulted in the rising level of their obligations towards foreign countries. This group included: Greece, Cyprus, Poland, Latvia, Romania and the United Kingdom.

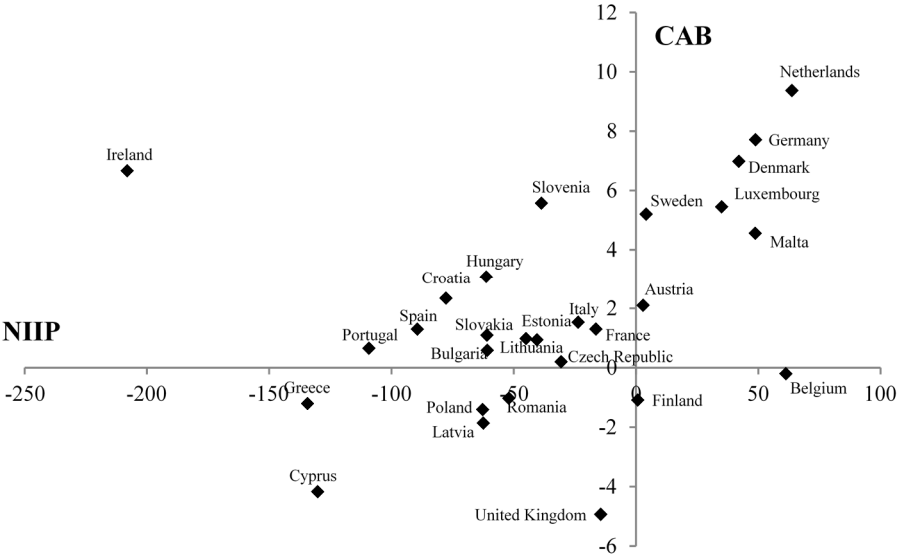

Figure 2. Current account balance* (CAB) and Net international investment position (NIIP) of the EU countries in 2015 (% of GDP)

*The average of the last three years

Source: own elaboration from (IMF, 2017a, 2017b) databases.

3. EXTERNAL BALANCE OF THE EU COUNTRIES

The intertemporal approach to the current account disseminated in the 80s of the 20th century implies that the developing countries benefit from resources of the developed countries (Obstfeld, & Rogoff, 1994), which let them increase their production capacities and boost the economic growth. Under this approach, the short-term current account deficit does not disturb the external balance of a given country (Sobański, & 2009) and does not require to undertake any corrective actions (Czarny, & Śledziewska, 2013). It constitutes a gap between domestic savings and investments and is aimed to smooth consumption by national entities over the long term. It means that its level is the result of increased current consumption against expected income growth in the future, which will allow for the repayment of liabilities (Landau, 2002).

However, disturbances at the financial markets which have recently affected the world economy caused that the external balance of individual countries has been the subject of research studies and assessments made from the perspective of their sustainable development. The advancing financial integration with the external environment cannot be perceived as a positive phenomenon only. It provides capital movements, access to finance and more efficient allocation of resources. However, it also poses risks related to the shift of crisis-related phenomena between and among economic partners. It could be especially

evident during the recent crisis when the extensive network of financial dependencies led to the contagion effect, which favoured the spread of economic problems (Wyciślak, 2012), also within the EU countries.

A series of indicators can be adopted to assess the external balance. In reference to the EU countries, these indicators are specified in the Regulation of the European Parliament and of the Council on the prevention and correction of macroeconomic imbalances (The European Parliament and the Council, 2011). They included:

– current account balance in relation to GDP;
– net international investment position in relation to GDP.

These indicators have their indicative lower and upper thresholds set to serve as alert levels.

The current account balance indicator under assessment takes into account the arithmetic mean of the previous three years. It is assumed that both excessive deficit (over 4% of GDP) and excessive surplus (over 6%) are unfavourable for the external balance This is particularly so in case of a monetary union where single exchange rates and common monetary policies cannot respond to adjustment needs of individual economies (COM, 2013, p. 25). In the analysed period, most of the EU countries reduced or even eliminated their deficits in the current account (Figure 3). As late as 2007 19 EU countries (including all new Member States) suffered from deficit while 13 of them had it at the level exceeding the warning threshold. Among the euro area countries the Baltic States should be listed first of all: Latvia (17.4% GDP), Estonia (13.4%), Lithuania (10.6%) but also Greece (10.4%) and Portugal (9, 9%). In the group of countries beyond the euro area, the highest deficit was recorded in Bulgaria (17.3% of GDP) and Romania (10.9%). In 2015 just 9 EU countries incurred deficit on the current account and only the United Kingdom (4.9%) and Cyprus (4.2%) exceeded the warning threshold. In 2015 other countries demonstrated surplus which in case of the Netherlands (9.4% GDP), Germany (7.7%), Denmark (6.9%) and Ireland (6.7%) exceeded the warning threshold.

With regard to net international investment position the warning threshold was set at -35% of GDP. At the end of 2015 only 8 EU countries were net creditors in relation to foreign countries; in the analysed period, all of them improved their investment position (Figure 4). They included first of all: the Netherlands (67.3% GDP), Belgium (61.3%), Germany (48.8%), Malta (48.7%), Luxembourg (34.9%) and – among countries beyond the euro area – Denmark (41.9%). The warning threshold in 2015 was exceeded by 14 countries, most of them from the euro area: Ireland (-208.1% GDP), Greece (-134.4%), Cyprus (-130.2%), Portugal (-109.3%) and Spain (-89.5%); while in the analysed period Ireland and Cyprus were the ones which to the greatest extent suffered from an increase in their net liabilities in relation to foreign countries. Among the countries beyond the euro area the largest net debtors in relation to foreign countries in 2015 were: Croatia (-77.8% of GDP), Poland (-62.7%), Hungary (-61.3%) and Bulgaria (-60.8%) of which only Poland increased the value of its net debt in relation to GDP.

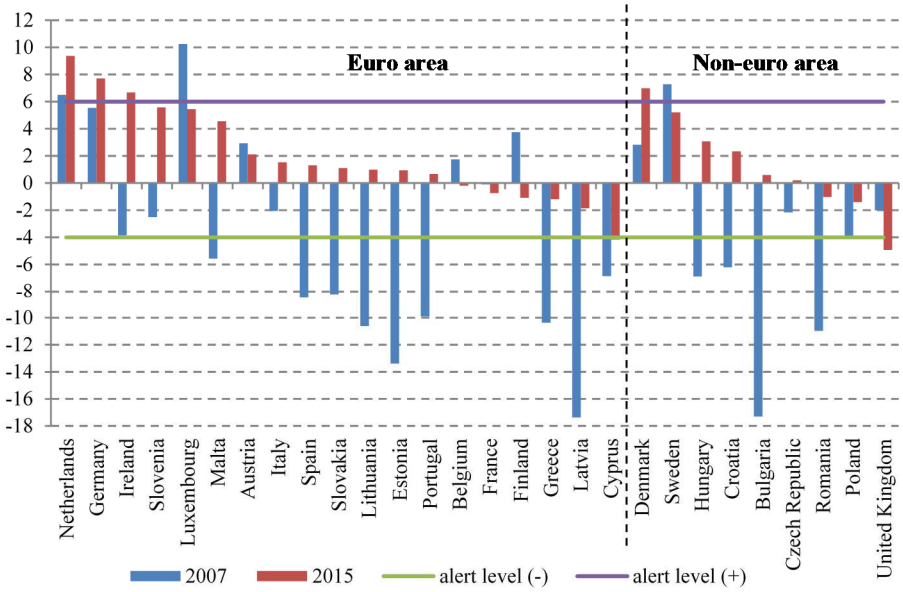

Figure 3. Current account balance* of the EU countries in 2007 and 2015 (% of GDP)
*The average of the last three years
Source: own elaboration from (IMF, 2017a, 2017b) databases.

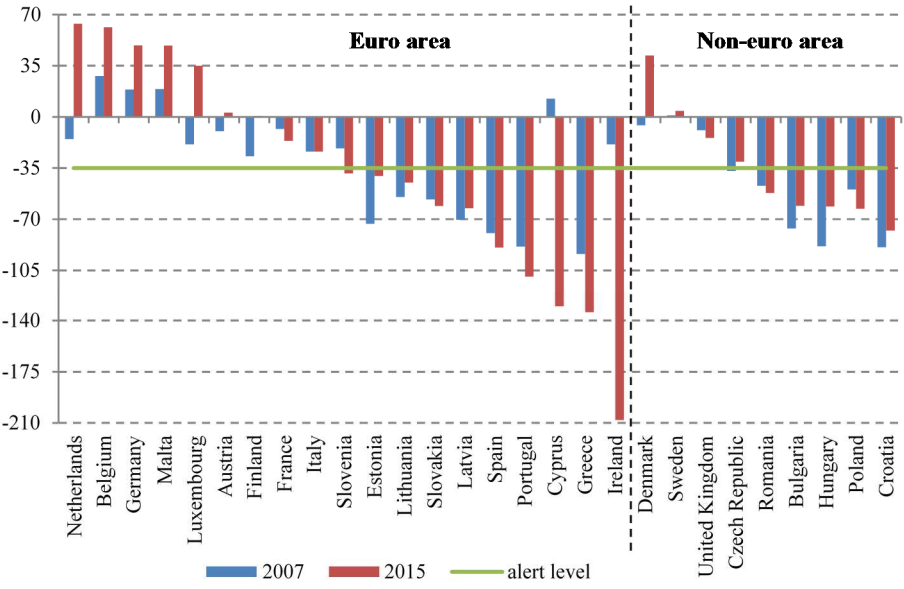

Figure 4. Net international investment position of the EU countries in 2007 and 2015 (% of GDP)
Source: own elaboration from (IMF, 2017a, 2017b) databases.

Due to the fact that not all obligations require handling i.e. repayment, when analysing their net international investment position additional measures such as gross external debt or foreign direct investments in total foreign obligations are taken into consideration. The first indicator refers only to debt instruments because they require handling (Janicka, 2014) while equity instruments are left behind (Knap & Nakonieczna-Kisiel, 2012). The second one informs on the level of stability of financing sources because foreign direct investments are permanently linked to the place of their location and are not susceptible to rapid capital flows.

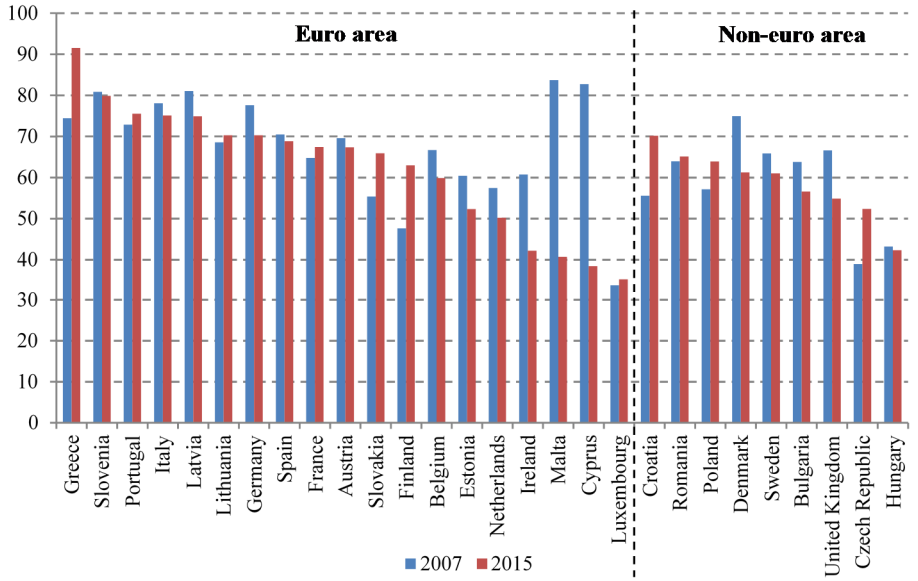

Figure 5. Gross external debt of the EU countries in 2007 and 2015 (% of liabilities)
Source: own elaboration from (IMF, 2017a) databases.

At the end of 2015 debt obligations had the highest share (exceeding 90%) in the structure of Greek liabilities while in case of Cyprus and Luxembourg they made less than 40% of total of foreign liabilities (Figure 5). In the group of countries beyond the euro area just in Hungary, the value of debt instruments did not exceed 50% of the total of its liabilities. In the remaining Member States this share was within 50-70%.

In the group of countries belonging to the euro area the highest share of foreign direct investments in the structure of liabilities at the end of 2015 years was recorded for Malta (75%) and Cyprus (63.6%), for which, in the analysed period, the role of FDI in the structure of liabilities increased significantly (Figure 6). A similar trend was observed in case of most other euro area countries apart from Slovakia, Slovenia, Finland and Greece. Estonia, the Netherlands and Belgium were also the ones which in 2015 had the value of their FDI at the level exceeding 50%. However, in case of Greece, this share was only 5.3% due to the fact that – starting from 2011- the structure of the Greek foreign liabilities was dominated by debt instruments.

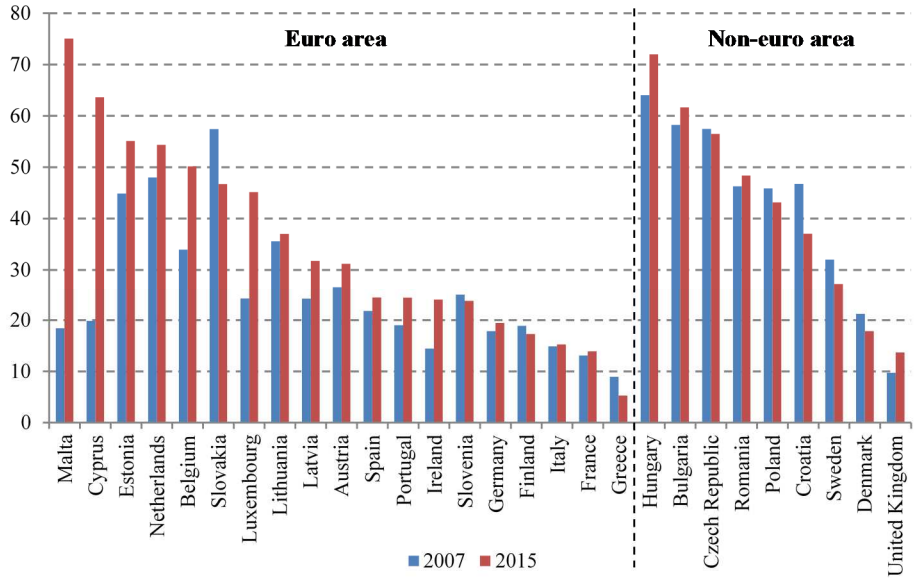

Figure 6. Gross external debt of the EU countries in 2007 and 2015 (% of liabilities)
Source: own elaboration from (IMF, 2017a) databases.

Among the countries beyond the euro area the highest share of FDI in the structure of liabilities was recorded in Hungary (72%), Bulgaria (61.6%) and the Czech Republic (56.5%). In this group in 2015 the United Kingdom had this ratio at the lowest level (13.7%).

To analyse the external balance, a series of measures based on reserve assets are applied. They include among others (Best, & Sobański, 2010):

– reserve assets in relation to gross external debt which informs how many foreign liabilities can be repaid with reserve assets;
– reserve assets in relation to monthly imports of goods and services which informs how many months of imports of goods and services can be covered with reserve assets.

The analysis on the value of reserve assets indicates their higher level in relation to the countries beyond the euro area. It applies to both indicators based on reserve assets (Table 3). In case of the countries such as Bulgaria or the Czech Republic at the end of 2015 their reserve assets covered more than 50% of gross external debt, and in case of Bulgaria, Croatia and Romania, their value corresponds to more than half-year imports of goods and services. Apart from Sweden and the Great Britain all other countries beyond the euro area got better results in this area compared to all the countries in the euro area. Among them, in 2015 only Latvia, Italy and Lithuania were able to finance – using their reserve assets – more than 5% of external debt, and in case of Italy, Portugal, Latvia and France, their reserve assets covered imports of goods and services for the period of more than 2 months.

Several factors have an impact on that the currency reserves of the euro area countries are relatively lower. In the euro area countries the European Central Bank (ECB)

takes over some functions related to the implementation of monetary policies and exchange rates. All countries which join the euro area are required to assign some of their reserve assets to implement these functions by to the ECB[2]. Furthermore, in monetarily integrated countries, their demand for reserves falls as its required level is usually referred to by the size of their foreign trading. The intensification of trading within the currency area leads to that a significant part of transactions take place between and among business entities using the same currency (Młodkowski, 2008).

Table 3. The ratio of reserve assets to the Gross external debt and to the monthly imports of goods and services, 2007 and 2015

Reserve assets/Gross external debt (%)			Reserve assets in months of goods and services imports		
Country	**2007**	**2015**	**Country**	**2007**	**2015**
Euro area					
Latvia	14.8	9.2	Italy	1.9	3.2
Italy	3.6	5.8	Portugal	1.5	2.9
Lithuania	25.7	5.5	Latvia	4.0	2.5
Portugal	2.3	4.5	France	1.8	2.2
Slovakia	11.0	4.0	Spain	0.5	1.8
Germany	2.5	3.5	Germany	1.3	1.6
Austria	2.2	3.4	Austria	1.1	1.4
France	2.4	2.8	Finland	1.0	1.4
Spain	0.8	2.7	Greece	0.4	1.2
Belgium	1.1	2.1	Netherlands	0.6	0.9
Finland	2.6	2.1	Cyprus	6.7	0.8
Estonia	12.9	2.0	Belgium	0.6	0.8
Slovenia	2.1	1.8	Lithuania	3.7	0.6
Greece	0.8	1.3	Malta	4.4	0.5
Netherlands	0.6	1.0	Slovakia	0.9	0.4
Cyprus	8.8	0.8	Slovenia	0.4	0.3
Malta	9.2	0.6	Estonia	2.4	0.3
Ireland	0.0	0.1	Ireland	0.1	0.1
Luxembourg	0.0	0.0	Luxembourg	0.0	0.1
Non-euro area					
Bulgaria	41.1	55.4	Bulgaria	6.0	8.4
Czech Republic	45.8	51.1	Croatia	5.9	7.8
Romania	46.3	39.2	Romania	7.1	6.3
Croatia	27.6	30.1	Denmark	2.7	5.6
Poland	28.1	28.8	Czech Republic	3.7	5.4
Hungary	13.6	21.4	Poland	4.3	5.1
Denmark	6.0	14.1	Hungary	2.7	4.0
Sweden	3.6	6.7	Sweden	1.8	3.5
United Kingdom	0.5	1.6	United Kingdom	0.8	1.9

Source: own elaboration from (IMF, 2017a) databases.

[2] The provided amount ranges from a few to several percent of the held reserves. For example, Lithuania, which joined the euro area in 2015, was obliged to provide the equivalent of EUR 338.6 million (ECB, 2014), which accounted for 4.7% of the Lithuanian reserve assets.

The analysis of external stability also takes into account measures based on the volume of exports of goods and services. They include, among others, (Najlepszy, & Sobański, 2010):

- exports in relation to GDP, which informs on economy's capacities to generate foreign currency inflows;
- exports in relation to gross external debt, which informs on capacities to finance the repayment of external debt making use of export inflows.

Table 4. The ratio of Exports to GDP and Gross external debt, 2007 and 2015

Exports/GDP (%)			Exports/Gross external debt (%)		
Country	**2007**	**2015**	**Country**	**2007**	**2015**
Euro area					
Luxembourg	156.7	198.0	Slovakia	140.6	111.2
Malta	121.8	143.8	Lithuania	66.6	101.8
Ireland	71.8	126.3	Estonia	56.2	85.1
Slovakia	87.0	94.9	Slovenia	64.5	68.5
Netherlands	65.7	83.8	Latvia	30.7	42.4
Belgium	71.2	82.5	Belgium	23.5	32.4
Estonia	61.8	80.0	Germany	27.4	32.2
Slovenia	63.8	79.4	Austria	25.8	31.0
Lithuania	47.2	77.7	Italy	23.0	24.4
Cyprus	44.8	62.3	Spain	16.6	20.1
Latvia	37.1	60.1	Portugal	14.9	19.1
Austria	50.8	54.1	Finland	35.1	17.8
Germany	40.1	47.8	Netherlands	13.4	15.7
Portugal	29.2	42.3	France	15.1	15.1
Finland	41.0	37.6	Ireland	9.2	14.5
Spain	23.9	33.6	Malta	25.3	14.1
France	25.9	31.7	Greece	14.6	12.2
Italy	25.1	30.8	Cyprus	13.9	11.3
Greece	19.6	30.5	Luxembourg	3.9	3.0
Non-euro area					
Hungary	72.1	93.9	Czech Republic	154.3	121.9
Czech Republic	55.5	83.8	Bulgaria	61.7	80.3
Bulgaria	54.7	66.7	Romania	50.0	74.0
Denmark	47.4	54.4	Poland	71.3	71.6
Poland	34.5	51.5	Hungary	60.1	71.3
Croatia	36.4	51.0	Croatia	47.4	49.0
Sweden	45.7	45.2	Denmark	28.5	34.6
Romania	25.5	42.6	Sweden	27.3	25.9
United Kingdom	25.7	28.1	United Kingdom	7.0	9.4

Source: own elaboration from (IMF, 2017a, 2017b) databases.

Within 2007-2015 only Finland and Sweden were characterised by no increase in the share of exports in GDP (Table 4). In 2015, in the group of the euro area countries this ratio was at the highest level in Luxembourg (198%) and Malta (143.8%) which are open to the world due to their size and resultant

limitations of their internal demand. Also in Ireland and Slovakia, export inflows had a significant impact on GDP. While their share in GDP did not exceed 32% in France, Italy and Greece. Among the countries beyond the euro area the ratio of exports to GDP in 2015 was the highest in Hungary (93.9%) and the Czech Republic (83.8%), while the United Kingdom recorded the lowest score (28.1%) out of all the EU countries.

In 2015 export inflows on goods and services would allow to repay external debt by such countries as the Czech Republic, Slovakia and Lithuania. Only five euro area countries covered more than 1/3 of their debt with exports; in Luxembourg it was just 3%. This ratio was reached at a higher level in most countries beyond the euro area apart from Sweden and the United Kingdom.

4. LINEAR RANKING OF THE EU COUNTRIES DUE TO THE STATE OF THEIR EXTERNAL BALANCE

Some of the measures specified above[3], upon their classification to a group of stimulants and destimulants, were used to rank the EU countries due to in terms of their external balance:

- current account balance in relation to GDP – stimulant;
- net international investment position in relation to GDP – stimulant;
- share of gross external debt in total liabilities – de-stimulant;
- share of FDI in total liabilities – stimulant;
- reserve assets in relation to gross external debt – stimulant;
- reserve assets in relation to monthly imports of goods and services – stimulant;
- exports in relation to gross external debt – stimulant.

This set of pre-defined variables was statistically verified in terms of their volatility and interrelation in order to eliminate any ones which insignificantly differentiate the countries under examination or any ones which duplicate information (Wawrzyniak, 2015). The critical value of the coefficient of variation was set at 0.1 (Zeliaś, 2000), which did not make grounds to eliminate any of the variables from the scope of interest. Then the analysis of interrelation of these variables were conducted using the method of reverse matrix of correlation coefficients assuming the critical value at 10 (Bąk, & Szczecińska, 2013). As a result, the ratio of reserve assets to gross external debt was excluded from the analysis due to the high level of its correlation with other variables.

In order to rank the EU countries the standardised sum method was applied which lets to lineally rank a set of objects specified by many different characteristics. It requires variables to be expressed in the same units and in the similar order of magnitude (Turczak, 2013). In this case, to achieve this effect, in the first step the variables were standardised according to the formula:

[3] The ratio of exports to GDP was omitted because this measure is much 'burdened' by different sizes of individual countries.

$$z_{ij} = \frac{x_{ij} - \overline{x}_j}{s_j} \quad (1)$$

where:

z_{ij} - standardised value of j variable for i country;
x_{ij} - value of j variable for i country;
$\overline{x}_j$ - arithmetic average of j variable;
s_j - standard deviation of i variable;
i - EU countries, $i = 1,2,\dots,n,\ n = 28$;
j - diagnostic variables, $j = 1,2,\dots,m,\ m = 6$.

This method (linear ranking) can be used when all variables take the form of stimulants or destimulants. In view of the above in this case destimulants were changed to stimulants by multiplying their standardised values by – 1 (Kopyściański, & Rólczyński, 2013).

In the further step, pattern and anti-pattern values were determined. For every diagnostic variables its maximum and minimum level was set which corresponds to each of the examined countries. The sum of the maximum values of the analysed variables makes a hypothetical pattern, while the sum of their minimal values – an anti-pattern. Therefore, the following formulas were used (Majewska, 2000):

$$p_W = \sum_{j=1}^{m} max\, z_{ij} \quad (2)$$

$$p_A = \sum_{j=1}^{m} min\, z_{ij} \quad (3)$$

where:

p_W - value of pattern;
p_A - value of anti-pattern;
z_{ij} - standardised value of j variable j for i country.

The calculated values are points of reference for the results set for individual countries. For each of the counties the standardised sums were calculated based on the values of individual diagnostic variables according to the formula:

$$p_i = \sum_{j=1}^{m} z_{ij} \quad (4)$$

where:

p_i - value of standardised sum for i country;
z_{ij} - standardised value of j variable for i country.

The calculated results are used to determine measures for individual countries, which are calculated according to the formula:

$$r_i = \frac{p_i - p_A}{p_W - p_A} \quad (5)$$

where:

r_i - value of measure for i country;
p_W - value of pattern;
p_A - value of anti-pattern;
p_i - value of standardised sum for i country

The measures take values from within [0,1], and for the pattern this measure is equal to 1, and for the anti-pattern – 0. The results determined for individual countries

inform about their distance (which can be expressed in percentage points) in relation to end points of this range as well as to other countries covered by the analysis. It lets to put the countries in order for 2015 in Table 5. In order to improve its legibility, the rank places from 1 to 14 and from 15 up to 28 were marked with different colours. The dominance of shaded areas within the lower part of the table stands for no significant and lasting changes in the rank under the analysed period.

Table 5. Order of the EU countries due to the external balance, 2007-2015

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	
	Rank									Measure
Denmark	10	10	9	5	4	4	3	4	1	0.727
Luxembourg	1	1	1	1	1	1	1	1	2	0.720
Germany	3	5	3	2	2	3	4	3	3	0.714
Netherlands	11	9	4	4	3	2	2	2	4	0.711
Sweden	4	7	7	8	7	5	6	6	5	0.648
Ireland	8	14	12	11	11	7	5	7	6	0.629
Malta	12	11	14	13	12	8	7	5	7	0.603
Finland	2	3	2	3	6	6	8	8	8	0.588
Belgium	7	6	8	7	9	11	11	14	9	0.573
France	5	4	6	9	8	9	10	10	10	0.570
Austria	9	8	10	10	10	12	9	9	11	0.569
Italy	13	12	11	12	13	13	13	12	12	0.557
Slovenia	**16**	**15**	**17**	14	**15**	14	14	11	13	0.554
United Kingdom	6	2	5	6	5	10	12	13	14	0.548
Estonia	**26**	**20**	**18**	**15**	14	**20**	**19**	**16**	**15**	**0.532**
Croatia	**21**	**19**	**24**	**23**	**18**	**21**	**22**	**21**	**16**	**0.524**
Hungary	**23**	**26**	**23**	**19**	**17**	**18**	**15**	**19**	**17**	**0.524**
Czech Republic	14	13	**15**	**16**	**16**	**15**	**16**	**17**	**18**	**0.519**
Spain	**19**	**18**	**21**	**20**	**19**	**17**	**18**	**18**	**19**	**0.502**
Poland	**17**	**17**	**19**	**21**	**24**	**22**	**23**	**23**	**20**	**0.465**
Slovakia	**18**	**16**	**20**	**22**	**23**	**16**	**20**	**20**	**21**	**0.461**
Bulgaria	**28**	**28**	**28**	**25**	**21**	**24**	**24**	**25**	**22**	**0.459**
Latvia	**27**	**27**	13	**18**	**22**	**25**	**26**	**26**	**23**	**0.452**
Portugal	**20**	**24**	**27**	**26**	**27**	**23**	**21**	**24**	**24**	**0.449**
Lithuania	**24**	**22**	**16**	**17**	**20**	**19**	**17**	**15**	**25**	**0.447**
Romania	**25**	**21**	**22**	**24**	**25**	**26**	**25**	**22**	**26**	**0.447**
Cyprus	**15**	**23**	**25**	**28**	**26**	**28**	**28**	**28**	**27**	**0.422**
Greece	**22**	**25**	**26**	**27**	**28**	**27**	**27**	**27**	**28**	**0.416**

Source: own elaboration from (IMF, 2017a, 2017b) databases.

It should be noted at the same time that the division of the old (EU15) and the new (EU13) EU countries were preserved. The upper part of the table is dominated by the EU15 countries. They included among others: Malta and Slovenia, which joined the EU in 2004. However, the lower part of the table is occupied by almost all the EU13 countries, with Spain, Portugal and Greece, the position of which in the range of external balance still differ from other EU15 countries.

At the end of the analysed period Denmark, Luxembourg and Germany were the highest rated; Cyprus and Greece – the lowest. At the same time within 2007-2015 the

position of Denmark and Estonia improved significantly against the background of other EU countries, while the highest decline in the ranking was reported by the United Kingdom and Cyprus. Thus, the intensity and direction of changes in the position of these countries in the ranking does not depend on their membership in the euro area (Estonia and Cyprus) or staying beyond it (Denmark and the United Kingdom).

5. CONCLUSIONS

The economies of the EU countries are characterised by a growing level of their financial integration with the external environment. This is mainly due to an increase in the level of liabilities in relation to foreign countries. With regard to some of these countries, their permanently negative international investment position is accompanied by deficit in the current account which deepens their need for external financing. Challenged by the global financial crisis and debt within the last few years, this state of affairs leads to making some considerations on the financial stability of the EU countries. A number of measures have been used and alert levels set (suggesting that it is required to take appropriate action) in these analyses. The synthetic measure of assessment of the financial balance of the EU countries applied in the article points to the ongoing division of the European Union into the new (EU13) and the old (EU15) Member States, which is related to their level of economic development and capital resources. The countries which undergo the process of transformation, open up to the world and modernise their economies, absorb foreign capital due to its shortage in the local market. It results in their lower ratings in the range of external financial stability. The adopted research method involves a number of constraints – it ignores detailed analyses of the balance of payments and its accounts, and therefore sources of its disequilibrium. Moreover, it was assumed that each of the selected measures has the same weight. These conclusions, however, may be the starting point for some in-depth considerations on the external balance of the individual countries or their groups, especially in the context of their membership in the euro area and the process of levelling economic development.

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4

Concentration Level of the Largest World Retailers Based on Various Concentration Measures as Knowledge Needed by Decision Makers[1]

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Summary:

The achieved retail concentration level is very important for both, the competition level of an economy and for customers. If the retail concentration is high, customers can expect to have higher products prices and lower products quality and supply. A high retail concentration is one of indicators of problematic market structures, such as monopoly and oligopoly, in which the leading company or companies can misuse their position. Therefore, many stakeholders are interested in observing changes of retail concentration measures over time: retailers, suppliers, the state and the public in the relevant market. In this research, various concentration measures are applied and explained based on secondary data published at relevant Internet sources. Afterwards, the retail sales concentration levels for the top 250 world retailers in 2010 and 2014 are compared. The emphasis is given to standardized concentration measures, i.e., concentration ratio, Gini's coefficient, Herfindahl-Hirschman's index, Rosenbluth's index and Hall-Tideman's index. The analysis has shown that the retail sales concentration level, measured through retail sales values, is low in the both observed years. The analysis results have indicated that the retail concentration level increased in 2014 in comparison to 2010.

Keywords: retail sales; concentration measures; top world retailers
JEL codes: D11, D12, B17

1. INTRODUCTION

Retail concentration process is manifested with the decreasing number of leading retailers with simultaneous increase in their market share and their market influence. In the paper, the various measures applied to assess retail concentration level are explained, and then retail sales concentration levels among the top 250 world retailers in 2010 and 2014 are studied and compared based on secondary data published at the

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relevant Internet sources. Descriptive statistics methods are used to present the retail sales data of the top 250 world retailers. In the analysis, several concentration measures are used. The emphasize is given to standardized concentration measures: standardized concentration ratio, standardized Gini's concentration coefficient, standardized Herfindahl-Hirschman's concentration index, standardized Rosenbluth's concentration index and standardized Hall-Tideman's concentration index.

As a contemporary trend, retail concentration is bringing new challenges to all market participants: suppliers, existing retailers and customers. In this paper, we will discuss concentrations in retail industry, particularly in grocery retailing. Various measures can be applied in order to assess the reached level of retail concentration. In this paper, the research question is if concentration level of the top 250 world retailers has risen in recent period. In the analysis, the most recent data from 2014 are going to be used. For the comparison, the year 2010 year was selected. Consequently, the research hypothesis states that the concentration level of the top 250 world retailers has risen in 2014 in compare to achieved concentration level in 2010.

After the introduction, in the second chapter brief literature review is given. In the third chapter, the used data and applied concentration measures are presented. In the fourth chapter the retail sales of the top 250 world retailers in 2010 and in 2014 are analysed by using descriptive statistics approach whereas in the fifth chapter achieved concentration level is determined by using selected concentration measures. The sixth chapter concludes the paper and brings some recommendations for further research.

2. LITERATURE REVIEW

In last decades, leading companies in the retail trade grow above average (Dawson 2006) and market concentration is observed as a one of key concepts and trends within the European retail industry.

Majority of authors focus on explanation of retail concentration as a process together with its consequences, there are various studies calculating concentration ratios for various markets. Some of them are explaining how concentration influences investments in retail innovation and improving consumer service.

However, there is a scarcity of papers, which are applying and comparing various measures of concentration at once. Both positive and negative effects of retail concentration are explained in literature. As positive effects we can outline (Battezzati and Magnani 2000; Hollingsworth 2004; Evans 2005; Dawson 2006; Amato and Amato, 2009; Knezevic et al. 2011): (1) productivity grows measured per employee or per square meter of retail space in leading companies, (2) investment ability of leading companies is increased so they can implement the newest ICT or logistic technology faster and easier than small companies, (3) ability to expand assortments and to adjust them to consumers also grows which have a positive effect on consumers' life quality in the given market, (4) potential to develop additional, value adding services is also improved, (5) ability to internationalize is increased, etc.

On the other hand, as negative effects authors emphasize (Marjanen 2000; Dawson 2006; Haines 2007; Amato and Amato 2009; Knezevic and Jagic, 2012): (1) large retailers have increased bargaining power which allows them to determine and set the price and other contractual conditions towards their suppliers, (2) wealth is accumulated in a limited number of companies and concentration decreases the level of competition, (3) the market entrance for new players becomes very though or impossible, (3) as dominant company controls all market processes towards supplier and consumer market, at some point of time improvements in technology, service and processes become obsolete, (4) as there is a lack of competition, the customers pays higher prices for the same quality of products or services.

There are two basic ways of acquiring a leading market position (Segetlija et al. 2011): (1) rapid organic growth of one or several companies in the market, and (2) concentrations throughout: mergers and acquisitions. While in the first case, a legal regulation is introduced to prevent misuse of the acquired leading position in the market, in the second case, legal regulations are set to control the concentration process as well. The latter mentioned concentrations (those via mergers and acquisition) are regulated by the state in order to avoid substantial lessening of competition at a certain market (Knezevic and Jagic 2012).

Mešić (2015) observed concentration in food retail sector in 2012. The conclusion about achieved concentration level he had brought only by calculating market shares. The author had remarked that the concentration level of the top 10 food retailers is higher in the developed countries of the European Union than in the other observed countries. In the same paper author had observed the concentration level of the top 250 companies with the highest retail sales in 2012 observing it by different aspects like by countries or regions. However, Mešić (2015) did not use any of specialized concentration measures in its analysis.

Martens et al. (2006) emphasize that the retail grocery concentration, measured by concentration ratio where the share of the four largest companies in the total retail companies is observed (concentration ratio 4), rose from 17.8 in 1982 to 43.0 in 1999. In the in-depth analysis, authors observe effect of Wal-Mart's development on market concentration. Despite Martens et al. (2006) conducted panel analysis to determine effects of Wal-Mart on concentration level they actually made conclusions about concentration levels by observing concentration ratio 4 values in different years and U.S. states.

Burt, Sparks and Telle (2010) focused on inspecting retailing in the United Kingdom. They concluded that in the United Kingdom, as in other European retail markets, the increase in concentration level is present. It has to be emphasized that this conclusion was made only by observing concentration ratio values based on market shares of retail sellers. Burt, Sparks and Telle (2010) had not used additional concentration measures, which would support the conclusions about concentration levels.

Konig (2009) observes concentration trends among food suppliers and retailers in selected OECD countries, with special focus on Hungary as a transition country. Konig (2009) emphasizes foreign direct investments in some cases could have significant impact on concentration levels of food suppliers

and retail sellers. In the paper, again, the concentration level was observed by using concentration ratios only.

Knezevic et al. (2014) calculated concentration ratios based on top 4, 5 and 10 leading grocery retailers' market shares in the EU grocery retail market. They conclude that all calculated ratios on EU level grew from 2000 to 2011 and that the concentration of grocery retail is one of the obvious ongoing economic trends in EU meaning that large retailers are taking larger part of grocery retail market each year in analysed period.

According to the brief literature review, it can be concluded that retail sales concentration was analysed by other authors. Unfortunately, they have based their conclusion about achieved concentration level at retail sales by using concentration ratios only. On that way other concentration measures, which would help to understand achieved concentration level and its trends better, were unjustly neglected.

3. DATA AND METHODS

In the paper, 250 companies with the highest retail sales in 2010 and in 2014 are observed. The data about the retail sales are taken from the National Retail Federation (2012; 2016). It has to be emphasized that the National Retail Federation consulted a large number of different sources to develop the list of 250 companies with the highest retail sales. Consequently, because of different methodologies used by the sources, some differences in retail sales values between the real ones and the used ones may be present. However, it is assumed that those differences are negligible and that used retail sales values are very accurate.

In order to measure concentration level among 250 companies with the highest retail sales in the chosen years, five concentration measures will be applied: the concentration ratio, the Gini's concentration coefficient, the Herfindahl-Hirschman's concentration index, the Rosenbluth's concentration index and the Hall-Tideman's concentration index. In the analysis both, unstandardized and standardized, versions of the chosen concentration measures will be observed. However, in order to make conclusions about achieved concentration levels, the standardized concentration measures are going to be preferred. The reason for such decision lies in the fact that standardized concentration measured can take a value from the 0 to 1 interval whereas unstandardized concentration measures are not set to get a value from that interval. On that way, unstandardized concentration measures could lead to wrong conclusions about achieved concentration level. Still, because the number of observed companies is quite large, very large differences between unstandardized and standardized values of the selected concentration measures are not expected.

Concentration ratio is very simple and the most used concentration measure that was developed at the beginning of the 19th century (Barbezat 2003). Concentration ratio shows the share of the certain number of units with the highest value of the observed variable in the total value of the observed variable when all units are taken into account. Concentration ratio is defined by equation (1) whereas standardized concentration ratio is given by equation (2) as follows:

$$CR_r = \sum_{t=1}^{r} x_i / \sum_{t=1}^{N} x_i \,,\ r = 1,2,\dots,N \quad (1)$$

$$CR_r^* = (CR_r - 1/N)/(1 - 1/N) \,,\ r = 1,2,\dots,N \quad (2)$$

where:

CR_r - is concentration ratio for first r units with the highest value of the observed variable;

$\sum_{i=1}^{r} x_i$ - is sum of values of the observed variable for first r units;

$\sum_{i=1}^{N} x_i$ - is sum of values of the observed variable for all N units;

CR_r^* - is standardized concentration ratio for first r units with the highest value of the variable considered;

N - is the total number of observed units.

Gini's concentration coefficient is based on the Lorenz concentration curve (Needleman 1978; Podder 1995). Whilst the Lorenz concentration curve is focused on graphical presentation of concentration, Gini's concentration coefficient uses area under the Lorenz concentration curve to estimate concentration level. Gini's concentration coefficient and standardized Gini's concentration coefficient are calculated as follows:

$$G = \left[2 \cdot \sum_{i=1}^{N} i x_i - (N+1) \sum_{i=1}^{N} x_i\right] \Big/ \left(N \cdot \sum_{i=1}^{N} x_i\right) \quad (3)$$

$$G^* = G \cdot N/(N-1) \quad (4)$$

where:

G - is Gini's concentration coefficient;

N - is the total number of observed units;

i - is rank of an unit, $i = 1,2,\dots,N$;

x_i - is the value of the observed variable for unit i;

G^* - is standardized Gini's concentration coefficient.

It has to be emphasized that units with lower values of the observed variable have lower ranks in compare to units with higher variable values. On that way, the unit with the smallest variable value has rank 1, the next unit by variable value has rank 2 and so on.

The Herfindahl-Hirschman's concentration index, which is one of the most used concentration measure in economy, is used as a monopoly level indicator on the market (Bikker and Haaf 2002). The Herfindahl-Hirschman's concentration index is defined as squared proportions of market shares of enterprises in an industry branch (Herfindhal 1950; Hirschman 1980). Consequently, the Herfindahl-Hirschman's concentration index and the standardized Herfindahl-Hirschman's concentration index are equal to:

$$HHI = \sum_{i=1}^{N} p_i^2 \quad (5)$$

$$HHI^* = (HHI - 1/N)/(1 - 1/N) \quad (6)$$

where:

HHI - is the Herfindahl-Hirschman's concentration index;

p_i - is proportion or share of the i-th unit in the total value of the observed variable;

HHI^* - is the standardized Herfindahl-Hirschman's concentration index;

N - is the total number of observed units.

The Rosenbluth's concentration index emphasizes importance of units with lower variable values (Rosenbluth 1955). Furthermore, Rosenbluth's concentration index is in relation with Gini's concentration coefficient. Consequently, the Rosenbluth's concentration index and the standardized Rosenbluth's concentration index are calculated by using following equations:

$$RI = 1/\left(2 \cdot \sum_{i=1}^{N} jp_i - 1\right) = 1/[N \cdot (1 - G)] \quad (7)$$

$$RI^* = (RI - 1/N)/(1 - 1/N) \quad (8)$$

where:

RI - is the Rosenbluth's concentration index;
j - is rank of an unit $j = N, N-1, N-2, \ldots, 2, 1$;
p_i - is proportion or share of the i-th unit in the total value of the observed variable;
RI^* - is the standardized Rosenbluth's concentration index;
N - is the total number of observed units.

In opposite to the Gini's concentration coefficient, here units with higher values of the observed variable have lower ranks in compare to units with lower variable values. In other words, the unit with the largest variable value has rank 1, the following unit by variable value has rank 2 and so on.

Very similar concentration measure to the Rosenbluth's concentration index is the Hall-Tideman's concentration index (Hall and Tideman 1967; Bikker and Haaf 2002). The main difference can be found in the fact that the Hall-Tideman's concentration index, as opposite to the Rosenbluth's concentration index, more importance gives to units with larger values. Therefore, higher ranks are given to the units with higher variable values. The Hall-Tideman's concentration index and the standardized Hall-Tideman's concentration index can be calculated as follows:

$$RI = 1/\left(2 \cdot \sum_{i=1}^{N} jp_i - 1\right) = 1/[N \cdot (1 - G)] \quad (9)$$

$$RI^* = (RI - 1/N)/(1 - 1/N) \quad (10)$$

where:

HTI - is the Hall-Tideman's concentration index;
i - is rank of an unit $i = 1, 2, \ldots, N-2, N-1, N$;
p_i - is proportion or share of the i-th unit in the total value of the observed variable;
HTI^* - i is the standardized Hall-Tideman's concentration index;
N - is the total number of observed units.

Depending on the concentration limits definition, the conclusion about achieved concentration level can be made on different ways. Here five concentration levels are recognized and the limits for making conclusions about achieved concentration levels are shown in Table 1. However, because behind the Herfindahl-Hirschman's concentration index different approach to concentration evaluation can be found, this concentration measure has different defined limits to make conclusions about achieved concentration levels. So, in the case when the Herfindahl-Hirschman's concentration index is lower than 0.01, a perfect equality is reached, if it is between 0.01 and 0.15, a low

concentration level is achieved, if it is between 0.15 and 0.25, a moderate concentration level is present and if the Herfindahl-Hirschman's concentration index is equal to 0.25 or higher, the conclusion about high concentration level presence follows.

Table 1. Concentration measures values and corresponding concentration level, except for the Herfindahl-Hirschman's concentration index

Concentration measure value	Concentration level
0.00	Perfect equality
0.00 – 0.25	Low
0.25 – 0.40	Low to moderate
0.40 – 0.60	Moderate
0.60 – 0.75	Moderate to high
0.75 – 1.00	High
1.00	Perfect inequality

Source: own elaboration.

After the selected concentration measures calculation and making conclusion at each concentration measures, the general conclusion about achieved concentration level in 2010 and in 2014 will be made. Finally, the achieved concentration levels in the observed years are going to be compared.

It has to be emphasized that before concentration analysis, retail sales of the top 250 world retailers in 2010 and 2014 will be examined by using descriptive statistics approach.

4. DESCRIPTIVE STATISTICS ANALYSIS OF RETAIL SALES IN 2010 AND IN 2014

In the paper, top 250 world retailers according to their retail sales value in 2010 and in 2014 are observed. Despite the same number of companies is observed in the selected years, it does not necessary means that the same companies are included in the analysis. In dependence of it retail sales value a company could be included in the top 250 in 2010 but not in 2014 and vice versa. This situation can be illustrated if only top 20 world retailers in 2010 and in 2014 are observed. The list of top 20 world retailers in 2014 and comparison to their rank in 2010 is given in Table 2.

According to Table 2 Wal-Mart Stores, Inc. convincingly has the highest retail sale in 2014. Costco Wholesale Corporation on the second place had retail sale more than four times lower than Wal-Mart Stores, Inc. in 2014. Very similar relation between Wal-Mart Stores, Inc., the first one in 2010, and Carrefour S.A., that was second in 2010, was in 2010 also. The most companies in top 20 increased their retail sales in 2014 in compare to 2010. The huge increase in retail sales value of Albertsons Companies, Inc. has to be emphasized. Albertsons Companies, Inc. increased its retail sales for 1,368% in 2014 in compare to 2010. On that way, Albertsons Companies, Inc. managed to jump from place 210 in 2010 to place 17 in 2014. On the other side, some companies had decrease in their retail sales and, consequently, they did not enter the top 20 World retailers list in 2014 again.

Table 2. Top 20 World retailers in 2014, according to retail sales values, and comparison to their rank in 2010, in millions of US $

Retail sales rank, 2014	Retail sales rank, 2010	Company	Country of origin	2014 retail sales (US$m)	2010 retail sales (US$m)	Index, 2010 = 100
1	1	Wal-Mart Stores, Inc.	USA	482,130	418,952	115
2	7	Costco Wholesale Corporation	USA	116,199	76,255	152
3	5	The Kroger Co.	USA	109,830	82,189	134
4	6	Schwarz Unternehmenstreuhand KG	Germ.	94,448	79,119	119
5	9	Walgreens Boots Alliance, Inc.	USA	89,631	67,420	133
6	8	The Home Depot, Inc.	USA	88,519	67,997	130
7	2	Carrefour S.A.	France	84,856	119,642	71
8	10	Aldi Einkauf GmbH & Co. oHG	Germ.	82,164	67,112	122
9	3	Tesco PLC	Un. Kin.	81,019	92,171	88
10	28	Amazon.com, Inc.	USA	79,268	33,251	238
11	11	Target Corporation	USA	73,785	65,786	112
12	13	CVS Health Corporation	USA	72,007	57,345	126
13	4	Metro Ag	Germ.	68,066	88,931	77
14	17	Aeon Co., Ltd.	Japan	63,635	53,458	119
15	20	Lowe's Companies, Inc.	USA	59,074	48,815	121
16	15	Auchan Holding SA	France	59,050	55,212	107
17	210	Albertsons Companies, Inc.	USA	58,734	4,000	1,468
18	16	Edeka Group	Germ.	52,477	54,072	97
19	26	Casino Guichard-Perrachon S.A.	France	51,257	37,875	135
20	14	Seven & i Holdings Co., Ltd.	Japan	47,795	57,055	84

Source: own elaboration.

Table 3. Basic descriptive statistics results for variable retail sales of the top 250 world retailers in 2010 and 2014, in millions of US $

Statistics	2010 retail sales (US$m)	2014 retail sales (US$m)
Count	250	250
Sum	3 940 748	4 308 416
Mean	15 763	17 234
Standard deviation	31 321	35 564
Coefficient of variation (%)	198.70	206.36
Kurtosis	111.13	118.06
Skewness	9.13	9.48
Mode	6 020	7 894
Minimum	3 292	3 508
1st quartile	4 531	4 832
Median	7 665	7 430
3rd quartile	14 058	15 354
Maximum	418 952	482 130
Range	415 660	478 622
Interquartile range	9 527	10 522

Source: own elaboration.

According to Table 3, the total retail sales value of the top 250 World retailers was 3,940,748 million of US $ in 2010 and 4,308,416 millions of US $ in 2014. Therefore, the retail sales value increase for 9.33% in 2014 in compare to 2010. The mean retail sales value of the top 250 World retailers increased for the same rate also.

Measures of data variability, standard deviation and coefficient of variation also increased in 2014 in compare to 2010. Standard deviation increased for 13.55% and coefficient of variation for 3.86%. On that way, the both measures indicated that the data variability is increased in 2014 in compare to 2010 meaning that the differences in retail sales values between the top 250 World retailers became larger. So, standard deviation and coefficient of variation are suggesting that the concentration level of the top 250 World retailers, according to variable total retail sales, increased in 2014 in compare to 2010.

According to the skewness indicator values, in both observed years the distributions of the total retail sales values of the top 250 World retailers are very positively skewed. The reason for such situation can be found in the fact that there are some retailers with significant higher retail sales value than the other retailers. On that way, the skewness indicators are pointing out that some concentration level is present here. Furthermore, the skewness indicator is 3.81% higher in 2014 than in 2010. That could be a sign that the concentration level in 2014 is higher than in 2010.

Measures of data spread, range and interquartile range, increased 15.15% and 10.44%, respectively, in 2014 in compare to 2010. Those are signs that the differences in retail sales values between the top 250 World retailers are becoming larger. Therefore, the both observed measures of data spread are suggesting concentration level increase in 2014 in compare to 2010.

5. CONCENTRATION LEVEL ANALYSIS

The conducted descriptive statistics analysis suggested that concentration level is higher in 2014 than in 2010. However, the exact concentration level will be measured by the selected concentration measures. In Table 4 the values of unstandardized concentration measures in 2010 an in 2014 are provided.

Table 4. Concentration measures values, 250 companies with the highest retail sales, 2010 and 2014

Concentration measure	2010		2014		Index, 2010 = 100
	Value	Concentration level conclusion	Value	Concentration level conclusion	
Concentration ratio 1	0.1063	Low	0.1119	Low	105.26
Concentration ratio 2	0.1367	Low	0.1389	Low	101.61
Concentration ratio 4	0.1826	Low	0.1863	Low	102.00
Concentration ratio 10	0.2943	Low to moderate	0.3036	Low to moderate	103.16
Gini's concentration coefficient	0.5682	Moderate	0.5771	Moderate	101.57
Herfindahl-Hirschman's concent. index	0.0197	Low	0.0210	Low	106.27
Rosenbluth's concentration index	0.0093	Low	0.0095	Low	102.11
Hall-Tideman's concentration index	0.0026	Low	0.0025	Low	99.43

Source: own elaboration.

For the purpose for determining concentration level, four concentration ratios have been developed. The first concentration ratio or concentration ratio 1 measures concentration level by taking into account only company with the highest retail sales value. On the other hand, concentration ratio 2 takes into account two companies with the highest retail sales values, concentration ratio 4 takes four companies into account and concentration ratio 10 includes 10 companies. According to Table 4 concentration rates 1, 2 and 4 show that concentration level might be considered to be low whereas concentration ratio 10 points out that concentration rate was low to moderate in 2010. The same conclusions about concentration level, based on the concentration ratios, can be made for 2014 also. However, all four concentration ratios show that concentration level is higher in 2014 than in 2010. The increase in concentration level ranges from 1.61%, according to concentration ratio 2, to 5.26%, according to concentration level 1.

Gini's concentration coefficient is the only concentration measure that shows moderate concentration levels in both observed years. Again, the value of Gini's concentration coefficient increased from 0.5682 in 2010 to 0.5771 in 2014. The 1.57% increase in Gini's concentration coefficient between these two years confirmed that concentration level in 2014 is somewhat higher in 2014 than in 2010.

Herfindahl-Hirschman's concentration index, Rosenbluth's concentration index and Hall-Tideman's concentration index show that concentration levels in 2010 and in 2014 can be considered low. Herfindahl-Hirschman's concentration index showed that concentration level increased for 6.27% in 2014 than in 2010 whereas Rosenbluth's concentration index has shown concentration level increase of 2.11%. However, Hall-Tideman's concentration index is the only observed concentration measure that has shown concentration level decrease in 2014 in compare to 2010.

Table 5. Standardized concentration measures values, 250 companies with the highest retail sales, 2010 and 2014

Concentration measure	2010		2014		Index, 2010 = 100
	Value	Concentration level conclusion	Value	Concentration level conclusion	
Standardized concentration ratio 1	0.1027	Low	0.1083	Low	105.47
Standardized concentration ratio 2	0.1332	Low	0.1354	Low	101.66
Standardized concentration ratio 4	0.1793	Low	0.1830	Low	102.05
Standardized concentration ratio 10	0.2915	Low to moderate	0.3008	Low to moderate	103.20
Standardized Gini's concen. coefficient	0.5705	Moderate	0.5794	Moderate	101.57
Stan. Herfindahl-Hirschman's con. index	0.0158	Low	0.0170	Low	107.86
Stan. Rosenbluth's concen. index	0.0053	Low	0.0055	Low	103.72
Stan. Hall-Tideman's concen. index	0.2739	Low to moderate	0.2667	Low to moderate	97.36

Source: own elaboration.

In Table 5 values of standardized versions of the observed concentration measures are shown. The standardized concentration measures take into account number of observed values and on that way the values of unstandardized concentra-

tion measures are corrected and reduced to interval [0,1]. Consequently, more accurate conclusions about achieved concentration level by using Table 5 can be brought. If the conclusions about achieved concentration level between unstandardized and standardized concentration measures are compared it can be concluded that the difference is present only if Hall-Tideman's concentration indices are observed. According to Hall-Tideman's concentration index low concentration level was in 2010 and in 2014. However, according to the standardized Hall-Tideman's concentration index low to moderate concentration level was present in 2010 and in 2014.

Because the observed number of units is quite large, the differences between unstandardized and standardized concentration measures values are not very large when concentration ratios and Gini's concentration coefficients are observed. Consequently, the estimated increase in concentration levels at standardized versions of concentration ratios and the Gini's coefficient are very similar to those, which have been estimated by their unstandardized versions. Larger differences in estimated change of concentration level between 2014 and 2010 are present if the Herfindahl-Hirschman's concentration indices, the Rosenbluth's concentration indices and the Hall-Tideman's concentration indices are observed. According to the standardized Herfindahl-Hirschman's concentration index concentration level increased for 7.86% in 2014 in compare to 2010 whereas the standardized Rosenbluth's concentration index shows increase of 3.72%. On the other hand, the standardized Hall-Tideman's concentration index indicated that concentration level decreased for 2.64% in 2014 in compare to 2010.

Taking everything into account, especially if standardized concentration measures are observed, it can be concluded that the most of the observed concentration measures show that concentration level of the top 250 World retailers according to their retail sales is low in both years, 2010 and in 2014. However, all standardized concentration measures, except the standardized Hall-Tideman's concentration index, have shown that concentration level increased in 2014 as compared to 2010.

6. CONCLUSIONS

The analysis has shown that the retail sales concentration level, measured through retail sales values, is low in the both observed years, i.e. 2010 and 2014. However, the vast majority of applied concentration measures have shown that the retail concentration level increased slightly in 2014 in comparison to the 2010 level.

In the further research, changes in the retail concentration level should be monitored continuously to enable a timely reaction if the concentration level becomes too high. Now, the retail concentration level seems to be quite low for analysed units, but it has to be taken into account that only retailers at the world level were observed. In some countries, the retail concentration level still could be very high, and this might be a subject of the further research.

The results shown here, which describe an increased concentration level of the biggest world retailers in 2010 and 2014, should not be considered separately, but combined with other development level indicators, and in such a combination, they may be useful

to managers. The information on an increased concentration level of retail sales may influence their overall knowledge, necessary for decision making of those who would like to invest in the retail sales companies or units in the countries all over the world. Maybe some innovations should be introduced to change the way of offering and buying goods, to create not only more profit, but also more satisfied customers, saving the environment and improving the sustainable development at the same time.

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5

Regulatory Framework of Consumer Policy in Cross-border Trade

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Summary:

The paper deals with the legal framework of consumer policy in a cross-border context, explains the role of the European consumer strategy and provides guidelines for the regulation of cross-border e-commerce. Furthermore, it explains the importance of a digital market strategy for strengthening the EU market and gives some secondary data information on customers' perception and experiences in cross-border transactions in digital market. According to regulator announcements, online merchants can expect the implementation of the more sophisticated regulation and supervision of activities related to the online market for goods and services, including the regulation of parcel shipment. It is about seizing the way consumer complaints are filed and a new way of solving cross-border consumer disputes online. It is proposed to remove the barriers and harmonization of contract law at online shopping which will diminish a problem buyer has when relying on national contract law. There are some recommendations on how to remove unfair business practices on webshop, price comparison platforms, and other processes such as delivering goods and downloading digital content.

Keywords: European Union, consumer, regulation, policy, international trade
JEL codes: F13, Q17, Q18

1. INTRODUCTION

Consumer protection policy in the European Union aims, among other things, to encourage the strengthening of the political concept of the Digital Single Market that is constantly evolving. In the last twenty years of digital era, the success of the integration of European countries into a single market began to depend on Internet commerce. Development of digitalization in the market and in everyday life is aided by European political projects such as the digital economy. By using the digital market and e-commerce as a new trade technology, manufacturers and traders from less developed countries can much more easily attract customers from highly developed national markets and thus show their competitiveness based mostly on more affordable prices.

The digital single market of the European Union has a task to increase the efficiency of trade and at the same time enable the implementation of the European market economy and social welfare of all citizens. A key determinant in the implementation of a single market strategy is the empowerment of the consumer. It is important to influence on their thinking and buying decisions relating not only on the domestic market but also on purchasing goods and services cross-border from other EU countries and those third markets beyond integration. Knowing that customers have different experience and perceptions on different markets, as well as perceptions of other national markets, the unique consumer policy seeks to mitigate differences and standardize consumer protection in cross-border transactions.

The plethora of research shows that e-commerce as a new retail technology creates two effects on a retail offer: it reduces prices and offers a greater variety of deals compared with bricks and mortar stores. Both effects boost consumer welfare. In order for these effects to be reinforced, it is necessary reduce transaction and trade costs for customers. Cross-border e-commerce reduces costs and thus increases real household consumption that is considered as a major driver of GDP growth (Francois, Martens & Yang 2014). Online trade reduces the cost for consumers to gather information on the available supply of products. Traditional offline consumers rarely venture beyond the border and usually shop on their domestic market. Since any online shop is just a click away, online retailing technology allows consumers to extend their geographical range of information gathering and buying, going beyond the borders of their home market. Imported products are more attractive to consumers (Cardona, Duch-Brown and Martens, 2015), so it is important to remove cross-border barriers because putting price pressure on domestic markets leads to a price reduction there as well. This may be seen as an attraction to cross-border shopping for consumers, but there are many factors that appear and hinder consumers in making cross-border trade decisions. Consumer policy in cross-border retailing context is a key instrument for removing these unwanted factors.

The paper deals with the legal framework of consumer policy in a cross-border context, explains the role of the European consumer strategy and provides guidelines for the regulation of cross-border e-commerce. Furthermore, it explains the importance of a digital market strategy for strengthening the EU market and gives some secondary data information on customers' perception and experiences in cross-border transactions in digital market.

2. CONSUMER POLICY IN CROSS-BORDER CONTEXT

Establishment of the European Union and creation of Internal Market enabled the cross-border retailing of goods and services between EU Member States with no restrictions. Further, not only the restrictions are dismissed but also the rules on customs and other tariffs and charges have been abolished by the European Union law.

The European Union law doesn´t define „good", but according to the Article 28 (1) of the Treaty on the Functioning of the European Union (2012) (further: TFEU) it is stipulated that „the Union shall comprise a customs union which shall

cover all trade in goods and which shall involve the prohibition between Member States of customs duties on imports and exports and of all charges having equivalent effect, and the adoption of a common customs tariff in their relations with third countries.“Article 30 of the TFEU stipulates that „customs duties on imports and exports and charges having equivalent effect shall be prohibited between Member States. This prohibition shall also apply to customs duties of a fiscal nature.“ These Articles are the base for the free movement of goods between EU Member States and together with other fundamental freedoms (free movement of services, free movement of workers and free movement of capital) make the cornerstone of the EU Internal Market rules (Horak et al.,2015).

Despite the fact that there is no definition of goods in European Union law, the Court of Justice of the European Union (further: ECJ) has defined the goods in a series of its judgments (Case “Art Treasures” C-7/68, Thompson C-7/78; Amelo C-393/92, etc.). Beside the free movement of goods the freedom to provide services has to be discussed. It guarantees cross border provision of services with no barriers. It is guaranteed by the articles 56 to 61 of the TFEU. Article 56 of the TFEU stipulates that “…within the framework of the provisions set out below, restrictions on freedom to provide services within the Union shall be prohibited in respect of nationals of Member States who are established in a Member State other that of the person for whom the services are intended.” It is explicitly stated in the TFEU that the rules on free provision of services apply only if provision related to persons, goods or capital do not apply. By creating the EU Internal Market for goods and services the need to regulate the rights of consumers arose.

The development of consumer protection policy in the European Union begins in the 1975 by the Council Resolution of 14 April 1975 on a preliminary programme of the European Economic Community for a consumer protection and information policy which for the first time established and listed the basic rights of consumers. By signing the Treaty on European Economic Community (further: TEEC or the “Rome Treaties”), which entered into force in the 1957, the requirements for consumer protection at the European level were created. By the provision of Article 153 TEEC it was established that “in order to promote consumer interests and ensure a high level of consumer protection, the Community contributes to the protection of health, safety and economic interests of consumers, and to promote their rights to information, education and organization in order to protect their interests.” Although according to Baretić (2003) of “peripheral significance in terms of consumer referral in the context of agricultural policy and competition policy” it was later elaborated through all (so-called) Founding Treaties. In the 1993 by the EU Treaty, consumer protection is introduced into a special chapter XI of the Treaty by the provision of Article 129a and became an independent policy of the then European Community. By the remuneration given by the Treaty of Amsterdam (1997) the provision of Article 129a became an Article 153 whose text is completely identical to the previous one, and expressly states that consumer protection is a horizontal policy.

Today consumer protection, as an EU policy, is enforced by the Article 169 TFEU (ex Article 153 of the TEC):

1. In order to promote the interests of consumers and to ensure a high level of consumer protection, the Union shall contribute to protecting the health, safety and economic interests of consumers, as well as to promoting their right to information, education and to organise themselves in order to safeguard their interests.
2. The Union shall contribute to the attainment of the objectives referred to in paragraph 1 through:
   a) measures adopted pursuant to Article 114 in the context of the completion of the internal market;
   b) measures which support supplement and monitor the policy pursued by the Member States.
3. The European Parliament and the Council, acting in accordance with the ordinary legislative procedure and after consulting the Economic and Social Committee, shall adopt the measures referred to in paragraph 2(b).
4. Measures adopted pursuant to paragraph 3 shall not prevent any Member State from maintaining or introducing more stringent protective measures. Such measures must be compatible with the Treaties. The Commission shall be notified of them.

According to the Article 38 of the Charter of Fundamental Rights of the European Union (2012) Union policies shall ensure a high level of consumer protection. From the primary law it is obvious that the consumer protection is one of the main cornerstones of the EU and it has protection at EU level. It was precisely the creation of the internal market (Bodiroga et al., 2011) and accordingly, the requirement to realize the four fundamental economic freedoms the precondition for achieving the demand for an effective consumer protection policy in the European Union (Pošćić, 2005).

Grounded in primary sources of EU law, since consumer protection is the horizontal policy, secondary legislation in the area of consumer protection is extremely developed. It contains more than 90 directives that directly relate to consumer protection. This regulation has a strong impact on the legal systems of member states. Considering the directives relating to the consumer protection they can be categorized into certain areas depending on the right of the consumer to be protected. Therefore they are divided into directives that regulate the protection of health and consumer safety, the consumer's economic interests and protect consumers' rights (Baretić, 2003; Akšamović, Marton 2011).

The consumers' interest can be divided in five fundamental rights: The right to protect economic interests, the right to legal protection, the right to information and training, and the right to be represented (the right to be heard by the consumer) (Baretić, Kuzmanić, 2003). According to the Croatian National Program for consumer protection for the period 2007-2008 it is also possible to distinguish the right to compensation for damages and the right to associate, represent and participate in the consumer to exercise their rights.

According to Baretić (2013) the basic characteristics of consumer protection policy in the EU are:

1. consumer protection is an indirect policy of the European Union. It develops primarily within the framework of building up the internal market and

is not an independent policy within the European Union. However, the intention is, through the protection of the internal market and the harmonization of the Member States laws, to attract consumers to trade in other Member States and traders to trade therein;

2. consumer protection area is a shared competence between the European Union and the Member States;
3. consumer protection is the horizontal policy of the European Union. Consumer protection must be taken into account when implementing all other official policies, and thus regardless of which sector consumers belong or in which segment of the market they appear, their interests must be protected;
4. the rules of consumer protection rules are minimal harmonization (Akšamović, Marton, 2011). The European Union generally allows Member States to retain and prescribe more consumer protection if they deem it necessary and appropriate.

3. EUROPEAN CONSUMER STRATEGY

Consumer protection in the digital single market is one of the main priorities of European policy makers – with the aim of systematically taking into account the rights and needs of consumers in a rapidly changing digital environment (European parliament, 2015). The goals of consumer protection are achieved through the secondary legislation of the European Union. Secondary sources of EU law are legal acts adopted by EU institutions (Horak et al., 2011), international treaties regulating inter-relations between the EU and other international organizations or third countries (Horak et al. 2011).

At the latest, the EU action program in the field of consumer protection policy is in particular: the European Consumer Strategy in line with the EU 2020 Growth Strategy and the Consumer Program 2014-2020. In 2012 The European Commission adopted the European Consumer Agenda – Boosting confidence and growth which represents its strategic vision for EU consumer policy in the upcoming period. The aim of the Agenda was to maximize consumer participation and confidence in the market. By the European Consumer Agenda four key objectives that support the Europe 2020 Strategy are defined:

– improving consumer safety. Ensuring that products, services and food are safe. When analyzing product safety the effective product safety policy is to create a seamless safety net from the farm or the factory to the front door. As consumers use services across borders more frequently the question of their safety should be addressed at EU level or through the national level regulations which question merits further examination. Regarding the food chain the EU system of official controls should be made more efficient and allow the Member States, responsible for performing such controls, to maximize added value, while minimizing burdens for operator;
– enhancing knowledge (to be properly empowered, consumers must be provided with clear, reliable and comparable information and tools to understand it. Consumers and traders should be made better aware of their EU

rights and obligations to boost mutual trust and to find easy ways to a solution when something goes wrong. The Commission will work with intermediaries and traders to encourage them to move beyond mere compliance with legislation and to develop self-regulatory measures);

– improving implementation, stepping up enforcement and securing redress (only if consumers can enforce their rights throughout the EU and reputable traders see that unfair competitors face appropriate penalties we can expect cross border trade to continue to increase in the EU. The Commission will effectively enforce consumer law, focusing on key sectors and give consumers efficient ways to solve disputes. Concerning the rights to redress, the Commission will focus on ensuring the adoption and application of proposal on Alternative Dispute Resolution (ADR) and Online Dispute Resolution (ODR);
– aligning rights and key policies to economic and societal change (the imperative is to ensure that consumers have the confidence to buy online not only traditional goods and services as well as digital ones. Consumer laws should be updated to meet the needs of changing markets and to take account of emerging insights from behavioral sciences about how consumers behave in practice. Consumer laws should therefore be updated to meet the needs of changing markets and to take account of emerging insights from behavioral sciences about how consumers behave in practice. Barriers that currently prevent consumers from accessing the digital products and services they want anywhere in the EU should be removed. To address these issues the European Commission will work towards the specific objectives: adapting consumer law to the digital age and promoting sustainable growth and supporting consumer interest in key actors.

As it is concluded in the Agenda the comprehensive policy framework is designed to put consumers at the heart of the Single Market, as they are keys to growth in the EU. All the measures take into account the changes in consumption patterns observed on the ground, technological progress, fast moving markets, the need to empower consumers and ensure that they can exercise their rights effectively.

According to the Regulation (EU) No 254/2014 of the European Parliament and of the Council of 26 February 2014 on a multiannual Consumer Programme for the years 2014-20 and repealing Decision No 1926/2006/EC, EU will support consumer policy with a budget of EUR 188.8 million. It aims to help the citizens fully enjoy their consumer rights and actively participate in the Single Market, thus supporting growth, innovation and meeting the objectives of Europe 2020. The Consumer Programme 2014-2020 focus on four key areas:

– a single market of safe products for the benefit of citizens and as a component of competitive businesses and traders;
– a single market where citizens are well represented by professional consumer organizations whose capacity is built to meet the challenges of today's economic environment;

- a market where citizens are aware and exercise their rights as consumers so that they contribute to the growth of competitive markets, citizens must enjoy access to redress mechanisms in case of problems without needing to resort to court procedures which are lengthy and costly for them and the governments;
- a concrete and effective collaboration between national bodies to support the enforcement of consumer rights, support the consumers with advice.

Expected results within consumer programs are linked to the key priorities of the Commission's policy, in particular the single digital market, the implementation of consumer protection legislation, including consumer rights, firmer and fairer internal market and energy union.

For the purpose of enhancing consumer confidence in the single market in 2011 Communication from the Commission to the European Parliament, the Council, the Economic And Social Committee and the Committee of the Regions Single Market Act Twelve levers to boost growth and strengthen confidence "Working together to create new growth" proposed a series of measures, including proposals for alternative dispute resolution, collective legal protection and passenger rights. A new set of measures was presented by the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Single Market Act II Together for New Growth in 2012. This document is focused on revising the regulations on general product safety and market surveillance and includes an initiative to ensure increased transparency and comparability of fees for bank accounts and to make it easier for consumers to change bank accounts. Sector measures relate to consumer protection groups, consumer education and information and enforcement of consumer rights.

When analyzing consumer protection regulation it must be mentioned the importance of the role of the European Court of Justice in policy making. The European Court of Justice (further: ECJ) in its judgments gives the analysis of the consumer concept. In the first of its judgement in case C-210/96 Gut the ECJ defines the average consumer as a reasonably informed, careful and cautious (Pošćić, 2010; 2013). According to court practice, the consumer is a reasonable person who can read the product labels themselves and make a decision. A consumer is a person who can take care of his or her own interests. It is considered to be a person who independently makes an informed decision. The market would provide consumers with all the information they would be able to decide on. In a large number of cases, the state prohibited access to products which, by their composition, characteristics or labels, were not in accordance with national legislation (cases: Commission v. Greece, C-176/84, Commission v. Germany, C-178/84, Commission v. Ireland, C-113/80, Criminal proceedings against Jean-Pierre Guimont, C-448/98, Criminal proceedings against Zoni, C-90/86, Nespoli and Crippa, C-196/89, etc.). The Court's view is that it is necessary in a proper way to acquaint consumers with a product that contains precisely defined ingredients and is made in a certain way. The Court reaffirmed the right of states seeking to protect consumers and thus justifying a national measure that violates the principle of the free movement of goods but only if it finds that the consumer cannot otherwise adequately protect. It is the Court's view that

consumers will be adequately protected if proper and clear product information, in particular product characteristics, is provided in an easily understandable language. However, excessive effect can be achieved by too much information. Despite the good intentions of the legislator, it may happen that the consumer is burdened with too much information and cannot discern what matters to him. That is the main reason why the regulation constantly has to be re-examined.

4. REGULATION OF CROSS-BORDER E-COMMERCE

The current legal framework in the area of consumer protection in cross-border retail transactions including browsing, pricing, paying and parcel delivering is fragmented and significant differences between national consumer laws in the jurisdiction of the trader and consumer deter them from transacting across borders. This can be evidenced from the data published in the Consumer Conditions Scoreboard, EU-wide consumer surveys providing data on national consumer conditions, cross-border trade and the development of e-commerce. It is necessary to create coherent and accessible legal framework for consumer transactions in the internal market. Constant development in the area of digital technology are fundamentally changing the way consumers are making purchasing decisions.

When analyzing the regulatory framework of the Member States it is mostly harmonized with EU regulations what is questionable is the implementation into the business practice. The national regulators will have to face these issues and regulate it at the national level in accordance with their own business surroundings. The most important issue when discussing the consumer protection and cross-border retail practice is the question of e-commerce. This is the main retail channel that combines rules on consumer protection and distance selling.

Important restrictions in regulations specifically hindering cross-border e-commerce growth in Europe are identified: a) easy, safe, and convenient online payment that relates to tackling fraud and non-payments in cross-border sales; b) compliance with different data protection, privacy, and consumer and contract laws; c) legal uncertainty and general unfamiliarity with VAT rules, high VAT-related accounting and administrative costs, and difficult VAT registration and declaration procedures; and d) quality and transparency of logistics and distribution services (Ossel & Devoldere, 2017).

Consumer protection in this area is mainly regulated by the Directive 2011/83/EC of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council (hereinafter: Directive 2011/83/EC). The Directive aims at harmonizing certain aspects of the laws and other regulations in the Member States regulating the agreements between consumers and traders to achieve a high level of consumer protection. Directive 2011/83/EC gives definition of a “distance contract” as a contract that is concluded between the trader and the consumer under an organized distance sales or

service-provision scheme without the simultaneous physical presence of the trader and the consumer, with the exclusive use of one or more means of distance communication up to and including the time at which the contract is concluded.

Directive 2011/83/EU aims to create a unified source of consumer protection rules that would help its marketers to better use the potential of the internal market. Directive 2011/83/EU is a horizontal unification based on the clause of the targeted maximum harmonization (Akšamović, Marton, 2011). This directive is a framework document integrating all common and general provisions contained in other consumer directives where no particular issue underlying a specific directive would have been included.

Such an approach is a complete novelty in the area of consumer protection since the earlier directives in this area were actually vertical measures. Directive 2011/83/EC derogates from the earlier directives: Directive 85/577/EEC on contracts concluded outside business premises, Directive 97/7/EC on distance contracts and to a certain extent Directive 93/13/EEC on inadmissible contractual provisions in consumer contracts and Directive 1999/44/EC on certain aspects of the sale of consumer goods and associated guarantees.

5. DIGITAL MARKET STRATEGY

The European Commission's Digital Agenda for Europe provides the political context to transformation. With targets for the Digital Single Market including 50% of population buying online and 20% buying cross-border by 2015, retailing firms are key contributing sectors to a minimum increase of 4% in European GDP arising from the Digital market. The doubling of the share of electronic commerce in retail sales and of the internet sector in European GDP by 2015 provides an underlying goal for this agenda.

Directive 2011/83/EU fits in 2015 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "A Digital Single Market Strategy for Europe" (further: Digital Market Strategy). As it is stated in the Introduction of the Digital Market Strategy, the global economy is rapidly becoming digital. Information and Communications Technology (ICT) is no longer a specific sector but the foundation of all modern innovative economic systems.

According to the Strategy a Digital Single Market is one in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence. Regardless of the absence of physical barriers between member states the fragmentation of the Market exists. A Digital Single Market is one in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition and a high level of consumer and personal data protection. According to the Digital Market Strategy ensuring the Digital Single Market could contribute an additional EUR 415 billion to European GDP. The digital economy can expand markets and foster

better services at better prices, offer more choice and create new sources of employment. A Digital Market Strategy is based on three pillars: 1. Better access for consumers and businesses to online goods and services across Europe – this requires the rapid removal of key differences between the online and offline worlds to break down barriers to cross-border online activity; 2. Creating the right conditions for digital networks and services to flourish – this requires high-speed, secure and trustworthy infrastructures and content services, supported by the right regulatory conditions for innovation, investment, fair competition and a level playing field; 3. Maximizing the growth potential of European Digital Economy – this requires investment in ICT infrastructures and technologies such as Cloud computing and Big Data, and research and innovation to boost industrial competiveness as well as better public services, inclusiveness and skills.

According to the Digital Market Strategy consumer protection is one of the priority when analyzing access to online goods and services across the Europe. One of the reasons why consumers do not engage more in cross-border e-commerce is because the rules that apply to these transactions can be complex, unclear and may differ between Member States. Different Member States national consumer protection and contract laws discourage consumers and companies form cross-border trading. Although some aspects of the consumer protection and contract laws are harmonized at the EU level as the rules for on line sale (such as the information that should be provided to consumers before they enter into a contract or the rules governing their right to withdraw from the deal) other aspects of the contract (such as the remedies available, etc.) are regulated by the EU rules providing minimum harmonization. The idea is that the rules for online and digital cross-border purchase will increase consumer confidence in cross-border e-commerce. The common set of rules is, according to the Strategy, not enough. As the most important improvement for the consumers the Digital Market Strategy promote the need for more rapid, agile and consistent enforcement of consumer rules to make them fully effective. As the main improvement the online dispute resolution platform is considered. According to the abovementioned the set of rules impact on consumer behavior only if they are sustainable in a business environment.

6. ATTRACTIVENESS OF DIGITAL SINGLE MARKET

Consumer protection policy is a transversal policy. European legislation in this area deals with specific issues only, such as the provision of pre-contractual information or a right of withdrawal from a contract where the circumstances in which it was made, or the nature of the transaction justifies it. Constant developments in the area of digital technology are fundamentally changing the way consumers interact and shop online. Consumer protection in the digital single market is one of the main priorities of European policy makers – with the aim of systematically taking into account the rights and needs of consumers in a rapidly changing digital environment (European Parliament, 2015).

Online technology has introduced new ways of selling goods, advertising, and communicating with customers. It has created innovative ways of organizing, accessing, exchanging and evaluating such as prices, product or service features and reviews. Comparison online platforms are increasingly used where other customers' ratings are the main benchmark for product and service quality evaluation. Behavior of customers in purchasing process is greatly influenced by this information because they are easily accessible. E-commerce represents Internet-enabled non-store sales, which in 2015 across Western Europe, according to Euromonitor still represents only 7% of the total retail market, whereas store-based retailing represents 93%. The Digital Agenda Scoreboard (European Commission, 2014) reports that more than 50% of all consumers buy online but only 15% buy online across the border. A study of Benelux e-commerce market done by Ossel & Devoldere (2017) reveals the top obstacles to developing cross-border online retail sales are potentially higher costs of the risk of fraud and non-payments in cross-border sales, additional costs of compliance with different consumer protection rules and contract laws (including legal advice), and higher costs due to geographic distance.

The digital economy is driving a major transformation of the European retail sector. So often portrayed as a threat to traditional forms of commerce, the scale and nature of innovation being generated by a combination of online, store-based and multichannel retailers is in fact making a significant contribution both to the competitiveness of the European economy as well As well as the welfare of its consumers. The digital market has increased the consumers' welfare because they can choose one of two ways to buy online or offline. Consumers are seeing more competitive prices, greater convenience and new opportunities for cross-border purchasing.

At the EU Single Market level there is no statistical data, i.e. no statistical division between domestic and cross-border online transactions. Therefore the consumption by polling consumers is the only reliable way to track online and offline transactions. Francois, Martens, and Yang (2014) estimate the total value of online business-to-consumer (B2C) trade in goods in the EU at EUR 241 billion in 2011. Out of that total, EUR 197 billion (80%) is traded Domestically and only about 44 billion EUR crosses borders between EU Member States, and another 6 billion EUR (2%) is imports from non-EU countries. From a social welfare perspective these authors have shown that e-commerce has an overall positive effect on the economy, despite the negative effects that it may have on bricks and mortar stores. The impact of this new trade technology on the reduction of cross-border trade costs benefit the trade and economy in general. For example, B2C creates positive effect on GDP in European countries ranging from 0.01% in Romania, over 0.07% GDP in Hungary to 0.23% GDP in Slovenia and 0.25% in UK. The negative impact of this retail technology on offline traffic channels ranges from 0.98% in Ireland to 2.84% in Greece. E-commerce increased the productivity of retail sales in clothing, footwear and leather goods by 2.57% on average. Many retailers are rapidly complementing their bricks and mortar stores with online stores and thus share in the benefits of this channel.

While there are many virtual stores some of them are special ones very popular among consumers, they dominate the online market and make the most pressure on

retail prices. The economies of scale as well as high positions in online search engines give a strong boost to these favorite online platforms. The use of high-end web technology is an additional advantage of these online stores.

Data on confidence in domestic and EU cross-border online purchases in EU28 by Flash Eurobarometer 397 (European Commission, 2014) reveal that most European consumers feel confident (59%) about purchasing via the Internet from a retailer / provider located in their own country but only 36% feel confident about purchasing via the Internet from a vendor located in another EU country. However, trust is very high among people who have already made an online purchase: 90% are confident about purchasing domestically, and 80% are confident about cross-border purchasing. Confidence among people who have not made an online purchase is lower: 54% would be confident about purchasing domestically, but only 27% would feel confident about cross-border purchasing.

It is clear that barriers in achieving Digital Single Market goals exist. According to Reynolds and Cuthbertson (2014) these include: a) the uneven distribution of digital infrastructure, 2) low levels of consumer trust and an inconsistent experience in shopping online, particularly across borders, and c) a fragmented marketplace for firms in respect of a variety of issues ranging from electronic payment and physical distribution systems to uneven tax regimes across Member States. The complexity of doing business electronically across borders still acts as a disincentive for action by both consumers and firms.

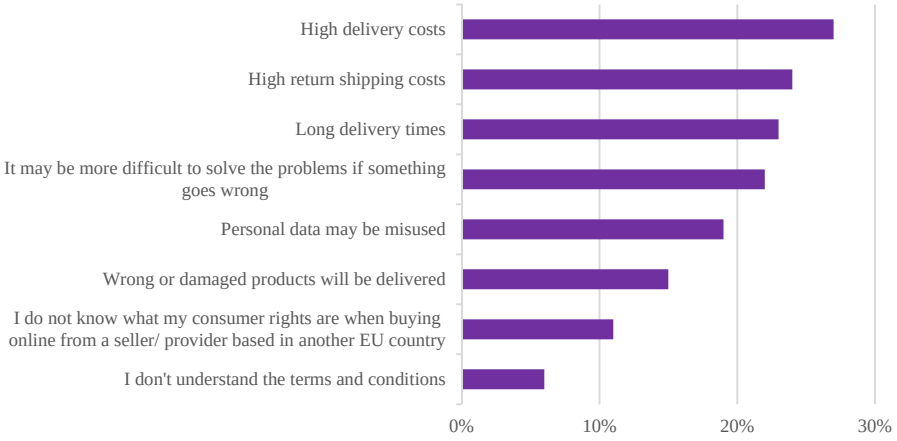

Figure 1. Main concerns about buying online in another EU country, EU28, 2015 (up to 5 answers) (%)
Source: Consumer Conditions Scoreboard 2015.

A survey of consumers were identified frequent and less frequent motives for which customers are not encouraged to buy cross-border in on-line shops. Some major reasons are shown in Figure 1. High delivery costs and high return shipping costs are the financial categories that customers often do not take into account when comparing prices or make the decision to buy or not able to include it the retail price,

therefore, that have a negative impact on perception on quarter of consumers. It is the new regulation underway to strengthen cross-border on-line focused on price transparency of parcel delivery in the single market. The third and fourth ranked reasons are related to psychological aspect of online shopping. Security of personal data can also be described as a disturbing factor influencing the decision to purchase.

Online retailers, especially smaller ones with weak bargaining power, can only poorly affect the cost of service delivery and they face limited selection and availability of quality and affordable delivery solution (e.g. the search function and monitoring, flexible delivery options for so-called last mile etc.). Online or multi-channel retailers are working under time pressure. The success of their business depends on the capabilities of the postal and courier delivery sector that is required to deliver at a low price and in a convenient manner. Small online retailers cannot look for substantial discounts on providers and therefore no convenient delivery options are available for their business. At the same time, they do not have the ability to invest in their own delivery network. In an environment based on volume economics, they cannot compete with larger traders.

7. CONCLUSION

Consumers and their spending for goods and services is a key variable of economic growth in Europe as private consumption creates a share of 57% of EU GDP, of which only 2% of GDP is related to B2C Digital market scheme. Consumers in the EU mainly buy online because of convenience, more affordable prices and because they have greater choice, however, the problem is that 61% of them decide to buy on the web sites on their national market due to lack of confidence in cross-border shopping. The result of the current policy of regulation has led to the fact that only 15% of Europeans buy on a single market outside their own country. These collected data on consumer attitudes force regulators to further harmonization and changes in the regulation of cross-border on-line retailing. For changes in regulation firstly it is necessary to change the existing digital market strategy which obviously does not produce sufficiently strong enough effect on consumers and their willingness to cross-border purchases.

According to regulator announcements, online merchants can expect the implementation of the more sophisticated regulation and supervision of activities related to the online market for goods and services, including the regulation of parcel shipment. It is about seizing the way consumer complaints are filed and a new way of solving cross-border consumer disputes online. It is proposed to remove the barriers and harmonization of contract law at online shopping which will diminish a problem buyer has when relying on national contract law. There are some recommendations on how to remove unfair business practices on webshop, price comparison platforms, and other processes such as delivering goods and downloading digital content. The regulator is planning to expand the powers of supervisory authorities in the Member States so they can more effectively monitor the presence of an unfair commercial practice in online retail. The emergence

of new business models in the digital economy opens up new opportunities for e-commerce growth but also the emergence of some that are not allowed, which will all affect the consumer position and consumer protection.

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6

Trade-related Issues of the European Union's Regulation and Policy on Genetically Modified Organisms[1]

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Summary:

The European Union (EU) has a strict regulation on genetically modified organisms (GMOs), which reflects strong societal and political opposition against agricultural biotechnology as well as serious concerns about food safety. The aim of this paper is to examine the European Union's regulatory framework and policy concerning the use of agricultural biotechnology with the main focus on the issues related to the international trade with GM (genetically modified) products. The analysis, based on legal documents, reports and statistical data, highlighted the European Union's strong commitment to the precautionary approach in policy-making towards GMO. Some of its aspects, such as a slow authorisation process and a "zero" tolerance for the presence of non-approved GMOs in the imported products, are highly criticized by the EU's trade partners. In their opinion, it creates unnecessary barriers to international trade and is not fully in compliance with the rules of the World Trade Organization (WTO). The trade dispute over GMO between the EU and the US as well as later trade concerns raised about the proposed changes of EU's GMO laws, revealed fundamentally different approaches of both sides towards risk management, but the WTO ruling in the dispute left open many questions. The controversial issue of the impact of GMOs on human health and environment, and the determination of appropriate actions, including trade measures against its potential risks needs to be further discussed and examined in view of new scientific evidence.

Keywords: European Union; GMOs; regulation; policy; international trade
JEL codes: F13, Q17, Q18

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1. INTRODUCTION

In the European Union, there has been a continuous debate about the use of agricultural biotechnology since the first field tests with genetically modified (GM) plants took place in the mid-1980s. Consumers, politicians, non-governmental organizations, and the media, often express strong opposition towards the GMOs and raise serious concerns about food safety.

High scepticism towards the GMO was reflected in the tough process-oriented regulatory approach of the European Union towards agricultural biotechnology, based on the precautionary principle. European regulators imposed strict control measures on approval and marketing of GMOs and GM products (also referred to as biotech products). It has led to a considerable slowdown in the research, development, and production of biotech (bt) crops at the European Union level. It has also an adverse impact on the international trade with GM products. Since the commercial GM crop cultivation within the European Union is minimal, the EU does not export biotech crops. However, the EU is a significant importer of soybean, maize, and rapeseed products, which are often genetically modified and mainly used as an animal feed (USDA, 2016).

Countries producing and exporting biotech products seek to ensure easy and reliable access to the European market for the GMOs they have developed, since their profits depend to a great extent on the economies of scale (Zarrilli, 2005). The strict EU's regulation and policy is considered by its trade partners to be a significant barrier to trade which may impede their exports. Some of the EU's policy measures concerning commercialization of GM products have been subject to a WTO trade dispute.

The aim of this paper is to examine the European Union's regulatory framework and policy concerning the use of agricultural biotechnology with the main focus on the aspects related to the international trade with GMO products. It presents the main elements of EU's regulatory approach and existing differences in the acceptance of GMO among member states. The paper addresses also the problem of the compliance of the EU's regulatory system with the WTO rules as well as it presents a considerable trade dispute over GMO-related issues at the WTO. It also briefly highlights the scope of cultivation and trade with the GM crops, based on available data from the International Service for the Acquisition of Agri-Biotech Applications (ISAAA), the European Commission and the US Department of Agriculture.

2. THE CULTIVATION AND TRADE WITH GM CROPS IN THE EUROPEAN UNION IN THE LIGHT OF GLOBAL TRENDS

Genetically modified crops have been approved and planted around the world since 1996. A cumulative area of 2 billion hectares of GM plants was cultivated globally in up to 28 countries, in the 20-year period 1996 to 2015. The annual global hectarage of GM crops multiplied from 1.7 million hectares in 1996 to 179.7 million hectares in 2015.

In total, North America and South America accounts for above 87% of the global GM crop area, while Europe's share is minimal – fewer than 1%. USA remains the world's largest grower of GM crops with 70.9 million hectares (39% of global cultivation area) of GM plants, mostly maize, soybean, cotton (table 1). The US is also a leader in first approval and commercialization of new GM varieties, such as the first time approval of a GM animal food product, namely GM salmon, which was authorised for human consumption in 2015. Brazil is the second largest grower globally with 44.2 million hectares (around 25% of global hectarage), followed by Argentina with 24.5 million hectares.

Table 1. Countries with the biggest global area of GM crops, 2015

Rank	Country	Area (million hectares)	Biotech crops
1	USA	70.9	Maize, soybean, cotton, canola, sugar beet, alfalfa, papaya, squash, potato
2	Brazil	44.2	Soybean, maize, cotton
3	Argentina	24.5	Soybean, maize, cotton
4	India	11.6	Cotton
5	Canada	11.0	Canola, maize, soybean, sugar beet
6	China	3.7	Cotton, papaya, poplar
7	Paraguay	3.6	Soybean, maize, cotton
8	Pakistan	2.9	Cotton
9	South Africa	2.3	Maize, soybean, cotton
10	Uruguay	1.4	Soybean, maize

Source: own elaboration based on: James (2015).

It is worth noting that since 2012 developing countries have grown more hectares of GM crops than developed countries. In 2015, Latin American, Asian and African countries collectively grew 97.1 million hectares (54% of total) compared with developed economies at 82.6 million hectares (46% of total).

However, although continuously expanding in the developing countries, GM crop plantings are still grown in a rather small number of countries. In total 28 countries planted biotech crops in 2015; out of that 20 were developing and 8 industrial. Many countries across Africa and Asia, apart from suspected health or environmental risks, cite the fear of future export losses as a reason for rejecting GM technology due to the tough political, social and regulatory environment in developed countries. One of problems, pointed out by developing countries considering to plant GM crops is the avoidance policy of big distributors in major markets like the EU and Japan, which often refuse to sell products with GMO ingredients in their retail chains, as they must adapt their offers to the consumer preferences, which are often shaped by negative perceptions of GMO.

It is difficult to access the volume of global trade in GM products, as in some countries GM and non-GM products are regarded as "like" products and they are not required to be segregated. However, the results of the study done by Brooks (2016) show that in the marketing year 2014/2015, 97.8% of global trade with soya came from countries which grow GM soybeans. The estimated share of GM maize exports in global trade with maize was 65%-71%. For cotton, the GM share of global trade

was about 67% and for rapeseed (canola) – 68%. There was also considerable international trade with GM soybean meal, cottonseed meal and rapeseed meal.

The total area of the GM planting in the European Union is very limited, amounting 136.3 thousand hectares in 2016. There has been no expansion in the area under cultivation over recent years. The only GM plant approved for cultivation, is MON810 maize (corn), resistant to the European corn borer. Another variety, the "Amflora" GM potato was banned by the EU General Court in 2013 after an initial acceptance by the European Commission.

In 2016 GM maize was grown only in four member states: Spain, Portugal, the Czech Republic, and Slovakia (table 2). Spain represented approximately 95 percent of the total area of GM planting in 2016 with the cultivation area of GM maize estimated at 129 thousands of hectares. The share of biotech maize in total EU's maize area was very low – around 1.5%.

Table 2. GM maize (corn) cultivation area in the EU in the years 2012-2016, in hectares

Criteria	2012	2013	2014	2015	2016*
Spain	116 307	136 962	131 538	107 749	129 081
Portugal	7 700	8 202	8 542	8 017	7 069
Czech Republic	3 050	2 560	1 754	997	75
Romania	217	834	771	2.5	0
Slovakia	189	100	411	400	112
Poland	4 000	0	0	0	0
Total BT maize area	131 463	148 658	143 016	117 166	136 337
Total maize planted in the EU	9 720 000	9 660 000	9 564 000	9 470 000	8 800 000
Share of BT maize in total EU's maize area	1.35%	1.54%	1.50%	1.24%	1.55%

*Estimate
Source: USDA (2016).

The EU does not export any GM plants. GM corn produced in the EU is used locally as animal feed and for biogas production. However, the EU is a major importer of GM soybean and corn and rapeseed products, which are mainly used as a feed ingredient in the livestock and poultry sectors. The EU does not produce enough to meet demand for protein and its livestock industry is highly dependent on the import of GM crops. These products are mainly sourced in countries where the cultivation of GM crops is widespread.

Table 3. Volume of the EU-27 imports of selected crops and by-products in thousand metric tonnes in 2010-2016

Crops (GM and non-GM)	2010	2011	2012	2013	2014	2015	2016
Soybean	12 472	12 070	12 538	13 293	13,914	15 006	13 800
Soybean meal	21 877	20 872	16 941	18 137	19 623	19 206	20 250
Maize (corn)	7 385	6 113	11 362	16 014	8 908	13 768	13 100
Rapeseed	2 624	3 752	3 378	3 524	2 317	3 494	3 700
Rapeseed meal	230	244	415	457	453	409	300

Source: USDA (2017).

In 2016 the total volume of soybean imports (including GM and non-GM soybean) to the European Union amounted to 13.8 million metric tonnes, and imports of soybean meal passed the level of 20 million metric tonnes (table 3). The volume of imports of maize was 13.1 million metric tonnes. The imports of rapeseeds amounted to 3.7 million metric tonnes and rapeseed meal 300 million metric tonnes. The data showed that there was an increase in the volume of imports of crops and by-products between 2010 and 2013, with the exception of soybean meal. The share of GM products in total imports varied depending on the type of product and was estimated at around 90 percent for soybeans, less than 25 percent for corn, and less than 20 percent for rapeseed (USDA, 2016).

The EU's leading suppliers of soybean oilseeds were Brazil and the United States, and of soybean meal – Argentina and Brazil. The largest users of soybean meal were Germany, Spain, France, the Benelux, and Italy, which are also major producers of livestock and poultry. Regarding imports of maize to the EU, the main partner was Ukraine. No production of GM crops has been officially allowed in Ukraine, but the share of GM crops is estimated at one third of the total country production. The US was the main supplier of by-products of corn processing: dried grains (DDGs) and corn gluten and meal (CGFM) to the EU. Although the EU is the world's leader in producing of rapeseed, on the common market the demand for this crop exceeds its domestic supply and large quantities of rapeseed are imported for crushing, mainly from Canada, where 95 percent of rapeseed is genetically modified; and from Australia, where the share of GM rapeseed is estimated at 17 percent of total.

The data show that even though the EU is a minor producer of GM crops, there is a substantial market in the EU for GM crops. Not surprisingly the trading partners of the EU express concerns about the market access conditions in the European Union market, and seek to reduce existing regulatory barriers in GMO trade.

3. THE MAIN ELEMENTS OF THE EU'S REGULATORY FRAMEWORK IN THE AREA OF GMO

The European Union has in place a comprehensive and strict legislation on genetically modified organisms, food and feed produced from or containing GMO ingredients. It is designed to prevent any adverse effects on the environment and the health and safety of humans and animals, based on a precautionary principle, and it addresses concerns expressed by sceptical consumers, farmers, and environmentalists.

The main aims of the complex legislation are as following (European Commission, 2017a):

- Protect human and animal health and the environment by introducing a safety assessment of the highest possible standards at EU level before any GMO is placed on the market.
- Put in place harmonized procedures for risk assessment and authorisation of GMOs that are efficient, time-limited and transparent.

- Ensure clear labelling of GMOs placed on the market in order to enable consumers as well as professionals such as farmers and distributors to make an informed choice.
- Ensure the traceability of GMOs placed on the market.

The EU's GMO legislation framework was established in the 1990s, not long after the first field tests had taken place. Currently, at the EU level, two basic and comprehensive legal acts regulate various aspects of GMOs: Directive 2001/18/EC on the deliberate release of GMOs into the environment, and Regulation (EC) 1829/2003 on genetically modified food and feed. These two main pieces of legislation are supplemented by the Directive (EU) 2015/412 amending Directive 2001/18/EC as regards the possibility for the member states to restrict or prohibit the cultivation of GMOs in their territory; Regulation (EC) 1830/2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms; Directive 2009/41/EC on contained use of genetically modified micro-organisms; as well as Regulation (EC) 1946/2003 on transboundary movements of GMOs. There is also a big number of implementing rules, specific recommendations and guidelines regarding GMO.

According to the EU Directive 2001/18/EC (2001), genetically modified organism (GMO) can be defined as "an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination". The directive deals with the deliberate release into the environment of GMOs for experimental purposes and with the placing on the EU market of products that consist of or contain GMOs (excluding processed food products deriving from GMOs which are covered by Regulation (EC) 1829/2003). It provides rules for assessing case-by-case the environmental risks associated with releasing GMOs, setting up harmonized procedures and criteria for granting consent. It introduces a mandatory monitoring system for GMOs and traceability at all stages of their placing on the market. Additionally, the directive sets up an advanced system for directly informing and consulting the general public, as well as establishes a labelling system.

Regulation 1829/2003 (2003), sets up procedures for the authorisation and supervision of genetically modified food and feed, and covers specific provisions for their labelling. Clear labelling is required for foods, which contain or consist of GMOs or are produced from ingredients produced from GMOs. According to the provisions, a relevant factor that justifies labelling is the process or production method of the GM food or feed, so it doesn't matter whether or protein resulting from the genetic modification was detected in the final product or not. However, if food or feed contains less than 0.9 % GMOs, it does not need to be labelled – as long as the GMO content is technically unavoidable.

Under the EU's legal framework, GMOs and food or feed produced from GMOs can be marketed in or imported into the EU, provided that they are authorised after passing strict evaluation and safety assessment requirements that are imposed on a case-by-case basis. The European Commission is responsible for risk management. Approval is given for a specific use, such as cultivation, imports for

food and/or feed use (for direct use or as a additive), or any combination of these. Authorisations are granted for a ten-year period by the European Commission. An application for authorisation of a GMO must be submitted to a national competent authority. The required risk assessments under this procedure is conducted by The European Food Safety Authority (EFSA), an independent body operating since 2002 for providing the European Community with scientific and technical support for food and feed safety issues. Based on EFSA's assessment, the Commission proposes to member states to accept or reject the application for authorisation. The proposal is sent to the Standing Committee on Plants, Animals, Food and Feed (for food and feed) or to Regulatory Committee (for cultivation) and can be accepted by a qualified majority. If the committee accepts the proposal, the Commission adopts it. If not, the Commission may summon an Appeal Committee, but if the Appeal Committee fails to reach an opinion, the Commission has to take the responsibility for the final decision (European Commission, 2017b).

However, in recent years, new legislative trends in the EU's policy has been observed, towards giving member states more autonomy in their decisions on GMOs and to allow them to take into account other considerations than those assessed under the EU procedure of authorisation. In the past, several EU countries restricted or totally banned cultivation of GM crops in their territories, based on adverse effects on health and the environment, by resorting to the safeguard clause of Directive 2001/18/EC, or by using the notification procedures under the rules on internal markets. As a result, even varieties already approved by the European Commission were not grown in these countries.

In March 2015 the European Parliament and the European Council adopted a Directive (EU) 2015/412 amending Directive 2001/18/EC as regards the possibility for the Member states to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory. It creates an additional legal basis to restrict or ban the cultivation at the country level. The new Directive inserts additional provisions into the Directive 2001/18/EC, which will remain in force and a risk assessment will still be performed at an EU level. In accordance with the new Article 26b during the authorisation procedure of a given GMO or during the renewal of consent/authorisation, a member state may demand that the geographical scope of the written consent or authorisation be adjusted and, as a consequence, all or part of the territory of that member state is to be excluded from cultivation. As a result of that legislation, EU member countries now have more flexibility to decide to what extent they are prepared to permit GMOs to be cultivated in their territories, taking into account certain national, regional and local instances, and without recourse to the safeguard clause. When imposing measures restricting or prohibiting cultivation of a GMO, countries can invoke such grounds as environmental policy objectives, town and country planning issues; land use; socioeconomic impacts, agricultural policy objectives or public policy.

Nineteen countries have decided to "opt out" GM crops cultivation for all or part of their territories (i.e. in certain regions), what reflects differences in the acceptance of GM crops within the EU (table 4). Out of 19 countries, nine countries

where cultivation was banned before under various legal procedures have opted out of GM cultivation under the new directive and eight countries and four regions where cultivation was not banned before have decided to prohibit GM cultivation under the new law. Four other countries grow GM maize and didn't use the opt-out clause and in the remaining countries or regions, cultivation is still allowed but no GM maize is grown for various reasons, including the fact that is not well suited to local climate, type of soil or other growing conditions.

Table 4. The use of "opt-out" provision by countries and regions in the European Union

Countries/regions in the EU	Opt out/ GM cultivation newly banned	Opt out/GM cultivation banned as before	No opt out/GM crops commercially grown	No opt out/ GM crops commercially not grown
Countries	Croatia, Cyprus, Denmark, Latvia, Lithuania, Malta, The Netherlands, Slovenia	Austria, Bulgaria, France, Germany, Greece, Hungary, Italy, Luxembourg, Poland	Spain, Portugal, Slovakia, The Czech Republic	Ireland, Romania, Sweden, Finland, Estonia
Regions	Wallonia in Belgium; Northern Ireland, Scotland and Wales in the UK	–	–	Flanders in Belgium, England in the United Kingdom

Source: own elaboration based on: USDA 2016.

While the final decision on cultivation is now left to the member states, the marketing and importing GMOs as well as food and feed produced with GMOs are still regulated at the EU level. However, in 2015 the European Commission proposed to amend regulation (EC) No. 1829/2003 to create a legal basis for the member states to restrict or ban the use of EU authorised genetically modified food and feed, on the basis of compelling grounds. New provisions would mirror and complement the rights already given to EU countries in respect of GMOs for cultivation and would enable them to address at national level considerations which are not covered by the EU decision-making process. The legislative proposal was rejected by European Parliament, due to the serious concerns about its consequences for functioning of the common market, but the issue is still under the considerable debate.

4. THE IMPLICATION OF THE REGULATORY APPROACH TOWARDS GMO ON MARKET ACCESS FOR BIOTECH PRODUCTS IN THE EUROPEAN UNION

Existing EU's regulation on genetically modified organisms constitute significant regulatory barriers for imports of GMOs and GM products to the common market. Strict regulation reflects the strong commitment of the European regulators and policy-makers to the use of precautionary principle in risk management.

The precautionary principle underpins environmental law in the European Union and has been extended to include public health and consumer safety (Garnett, & Parsons, 2016). Originating in German environmental legislation of the 1960s, the precautionary principle refers to a general rule of public policy action

to be used in situations of potentially serious or irreversible threats to health or to the environment, where there is a need to act to reduce potential hazard before there is a strong proof of harm (Harremoes et al. (eds.), 2002). It implies a cautious approach to adopting a new technology when existing scientific understanding is incomplete or when there is not a consensus about the nature of the threat. Accordingly, the precautionary principle shifts the burden of proof to the technology developer to demonstrate the "safety" or "lack of harm". The absence of danger must be examined on a case-by-case basis.

In the European Union's law the explicit reference to the precautionary principle is included in Article 191 in the environment title of the Treaty on the Functioning of the European Union. The guidelines for applying this approach are to be found in the Communication from the Commission on the precautionary principle (European Commission, 2000). There is also a reference to the precautionary principle in the new Directive (EU) 2015/412.

According to Garnett and Parsons (2016), the strong interpretation of the precautionary principle in the European Union tends to be applied especially where there is deemed to be a risk of severe consequences for public health, such as in case of the deliberate release of GMOs into the environment. Vogel (2015) states that over the years the European policy-makers have become more willing to regulate risks on precautionary grounds, while in the US increasingly sceptical American policy-makers have called for higher levels of scientific certainty before imposing additional regulatory controls on business.

The strong precautionary approach, taken by the European Union has led to a much smaller number of approvals of biotechnological products, comparing to other countries, particularly to the US. According to ISAAA (2017), in total 95 approvals have been granted in the European Union, mainly for direct use or additives in feed and food but only 10 for cultivation (only one product is currently authorised for cultivation- the MON810 maize). In the United States 195 approvals have been given, including 174 for cultivation. Such a limited number of approvals in the European Union can impede imports, since only authorised on a case-by-case basis products can be placed on the common market.

Moreover, procedures for approving biotech plants in the EU are time-consuming, involving a stringent risk assessment of their effects on the environment, human, animal or plant health. In the past, on the average, it tended to take up twice as long in the EU compared to other countries (LEI, 2008). Differences in the speed of authorisations lead to many situations where products are approved for commercial use outside the EU but not within the EU. The newer study shows that the approval time in EU is currently less than it is in the US – the procedure takes just under 5 years, but that is only because the GM products being evaluated are for import, not cultivation (Smart, Blum, & Wesseler, 2017).

The EU and a number of member states have enacted also strict labelling regulation, while US labelling requirements are more modest, requiring only the labels

of products which differ from their non-genetically modified counterparts. The labelling rules may be one of the reasons for the small number of GM food products available for purchase, even though a larger number is authorised.

Based on the precautionary principle, the EU applies also a zero-tolerance policy as regards the presence of non-authorised GMOs on its territory. It means that EU does not allow imported food and animal feed to contain GMOs that have not been authorised in the EU and when such a GMO is detected (above the technical zero of 0.1 percent), the whole shipment can be turned away. This policy makes it difficult to export many food products to the EU market, since it is very difficult to guarantee that these products will not contain traces of GMOs. European feed manufacturers have also criticized the zero-tolerance policy, claiming that this policy could result in price increases for feed and a loss of competitiveness for the EU livestock and poultry sectors. They argue that "in many cases livestock production will be forced to relocate outside of the EU, where ironically, animals will be fed on the same GM material prohibited by the EU" (Corporate Europe Observatory, 2011).

Additionally, the new national/regional cultivation bans, introduced on the legal basis of the new Directive (EU) 2015/412 as well as the proposal to allow member states to "opt out" the use of EU approved biotech crops are considered to be contemporary or potential barriers to trade, especially as they don't need to be justified on the ground of safety reasons.

5. THE EU'S REGULATION ON GMO AND THE WTO INTERNATIONAL TRADE RULES

The trading partners of the European Union often criticize the EU's regulation and policy measures on GMOs for constituting a substantial barrier to international trade. The question arises however, whether the EU's GMO regime is compliant with the WTO rules.

The trade-related aspects of the EU's regulation and policy are subject to several WTO agreements to which all WTO members are parties. A special relevance for international trade in GMO appears to have the Sanitary and Phytosanitary (SPS) Agreement, the Technical Barriers to Trade (TBT) Agreement, and the GATT 1994. The SPS Agreement, explicitly recognizes (in Article 2) that governments have the right to adopt regulations to protect human, animal, or plant life or health and to establish the level of sanitary or phytosanitary protection they determine to be appropriate (WTO, 2017). The SPS Agreement covers measures related to GMOs as they meet the definition of SPS measures, included in the Annex A to the agreement, especially due to the fact, that they may have the goal of protecting human or animal life or health from risks arising from additives, contaminants, toxins etc.

However, in the same Article 2 the SPS Agreement establishes a number of general requirements and procedures to ensure that governments adopt and apply SPS measures to protect against real risks rather than to create unnecessary barriers to trade. Members shall ensure that any sanitary or phytosanitary measure (such as, for example, a regulation banning or limiting imports of GM maize or soybeans) is

applied only to the extent necessary to protect human, animal or plant life or health; is based on scientific principles; is not maintained without sufficient scientific evidence; and do not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail. It shall not be applied in a manner which would constitute a disguised restriction on international trade.

Another important provision (Article 5 of the SPS Agreement) states that in any case WTO members shall ensure that their sanitary or phytosanitary measures are based on an assessment of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations and available scientific evidence. The latter provision allows applying the precautionary principle, as it permits the provisional adoption of sanitary or phytosanitary measures to avoid risk where relevant scientific evidence is insufficient, but on a very limited scope, since it obligates members to a more objective assessment of risk in a reasonable time.

Regarding the control, inspection and approval procedures Article 8 states, that they should be consistent with the provisions of Annex, which requires among others that such procedures are undertaken and completed without undue delay and in no less favourable manner for imported products than for "like" domestic products.

Labelling and documentation requirements related to food, nutrition claims and concerns, quality and packaging regulations are normally subject to the TBT Agreement. Its provisions give a country more flexibility to apply restrictive measures not only on the ground of sanitary reasons but also for instance to prevent deceptive practices. However, applied measures should not discriminate between imported products and "like" products of domestic or foreign origin. According to some interpretations, GMOs and GM products are considered "like" products in relation to conventional products, so there are no grounds for applying any special treatment to them, including mandatory labelling schemes (Zarrilli, 2005).

The issue of "like products" is also a crucial issue for determining if the EU law complies with the Article I ("most-favoured nation" clause) and Article III ("national treatment" provision) of the GATT 1994. The question is whether the importing country can ban GM imports but still import from the non-GM supplier. If the two types of crops are regarded as "like products" it would be a violation of the "most-favoured nation" clause. And any extra testing, labelling of imported foods or applying special conditions on the marketing that are more onerous than a domestic "like" product could contravene the principle of "national treatment".

According to Joslin (2015), in the absence of an international GM risk assessment standards, any restrictions on imports of GM products or material if not based on risk assessment and backed up by scientific evidence would be vulnerable to challenge at the WTO. The SPS Agreement recommends the WTO members to base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, which include first of all: 1) for food safety – the Codex Alimentarius; 2) for animal health and zoonoses – the standards, guidelines and recommendations developed under the auspices of the International Office of Epizootics; 3) for plant health – the international standards,

guidelines and recommendations developed under the auspices of the Secretariat of the International Plant Protection Convention (IPPC). However, the current level of harmonization is very low and leaves wide room for arbitrary interpretations. The case of WTO dispute on biotech products presented below highlights the most controversial issues around the EU's policy on GMO.

6. THE WTO DISPUTE ON MEASURES AFFECTING THE APPROVAL AND MARKETING OF BIOTECH PRODUCTS

In 2003, the United States brought a case against the European Union to the WTO challenging the EU's procedures for the approval of GMOs. In addition the US complained over the fact that that a number of EU member states maintained national bans on marketing and import GM products even though those products had already been approved by the EU for the use in the EU. Along with the US, Canada and Argentina filed separate complaints, addressing similar claims.

The complainants asserted that since 1998, the EU has applied a *de facto* moratorium on approvals of GMOs, since with minor exceptions, the EU and its member states approved no GM products between 1998 and 2004. The US has claimed that these measures has unfairly restricted imports of agricultural and food products from the United States to the amount of $ 300 million annually (Hanrahan, 2010).

According to the complaining parties, the measures at issue appeared to be inconsistent with the EC's obligations under several provisions of the SPS Agreement, the TBT Agreement, the Agriculture Agreement as well as Articles I, III, X and XI of the GATT 1994. In particular, they argued that there was no scientific evidence that GM food and feed crops were substantially different from, or any less safe than, conventional varieties.

In its defence, the EU has claimed that it is impossible to conclude scientifically, whether GM technology as a whole is safe or not and that GM products would have to be assessed on a case-by-case basis. It has further asserted that its approval process has not shown undue delay, but resulted from a lack of responses about GMOs to

EU's regulators, as well as the necessity to overcome public skepticism over genetically modified food. It also emphasized the fact, that its regulation is in compliance with the spirit of Cartagena Protocol on Biosafety, which seeks to preserve biodiversity, but to which the US is not a signatory.

In 2006, in its' final report, a WTO panel (established as a single panel to examine all the complaints in three biotech cases) found that the European Communities applied a general *de facto* moratorium on the approval of biotech products between June 1999 and August 2003, at the time of the complaint. The panel found also that, by applying this moratorium, the European Communities had acted inconsistently with its obligations under Annex C, first clause, and Article 8 of the SPS Agreement because the *de facto* moratorium led to undue delays in the completion of EC approval procedures. The panel, however, dismissed several other claims, including claims that EU approval procedures were not based

on appropriate risk assessment and that the EU unfairly applied different risk assessment standards for GM processing agents. It also didn't conclude that the EU had unjustifiably discriminated between WTO members. Nor did the panel report stated that existing EU GMO regulations themselves were consistent with the obligations under the SPS Agreement, which leaves open many fundamental questions whether GM foods were safe for consumption.

Regarding the country level, according to the panellists, member state safeguard measures were not based on risk assessments satisfying the definition of the SPS Agreement and hence could be presumed to be maintained without sufficient scientific evidence. Thus, the European Communities acted inconsistently with its obligations under Articles 5.1 and 2.2 of the SPS Agreement.

The panel report was adopted in November 2006. The EU subsequently moved several products through the approval process but the US still considers the number of authorisations too small. Despite the panel's ruling, some EU member countries had maintained national bans and new EU laws (Directive (EU) 2015/412) provided them an additional legal basis for adopting new ones.

Thus, the GMO remains a controversial issue in transatlantic relations, with different regulations reflecting divergent approaches towards risk management. In 2015 several trade partners raised concerns about the proposed European Union's amendment of Regulation (EC) No. 1829/2003, which would allow EU member States to restrict or prohibit the use of genetically modified food and feed approved at EU level. The United States claimed that the amendment would allow EU member states to restrict or ban the use of such products with no justified reasons, on arbitrary ground and in a discriminatory manner. According to the US, the proposal could have potential adverse effects on trade, including unfair competition, regulatory uncertainty, increased costs, and damages to integrated supply chains. Argentina, Paraguay, Uruguay, Brazil and Canada raised similar concerns, stating that the proposed amendment would create unnecessary barriers to international trade (WTO, 2015). The introduction of the new EU rules might lead to initiating new WTO disputes in future.

The current negotiation of the Transatlantic Trade and Investment Partnership (TTIP) gives some opportunity to look for ways to reduce differences in regulations, but the topic remains very controversial and politically sensitive on both sides of the Atlantic and the outcome of negotiations remains uncertain.

7. CONCLUSIONS

The European Union has in place a comprehensive and strict legal regime on genetically modified organisms. It is designed to prevent any adverse effects on the environment and the health and safety of humans and animals, and it addresses concerns expressed by sceptical consumers, farmers, and environmentalists. The precautionary principle was and still is a central point of the EU's regulatory approach towards GMO which results e.g. in small number of approvals of biotech products and in a zero-tolerance policy for the presence of GMOs not yet approved in the EU on its territory.

Due to strict regulation, the cultivation of GM crops in the European Union is very limited, and the EU does not export GM crops. At the same time it is a significant importer of GM soybean, maize, and rapeseed products, mainly used as an animal feed. The exporting countries as well as the European feed industry express strong criticism of the market access conditions for GMOs.

Some of the EU's trading partners claim that the EU's regulation on GMO creates substantial barriers to international trade and is not fully in compliance with the WTO rules. The trade dispute between the EU and the US revealed fundamentally different approaches of both sides towards risk management, but the WTO ruling in the dispute on biotech products left open many questions. The controversial issue of impacts of GMOs on human health and environment, and the determination of appropriate regulation (including trade measures) against its potential risks need to be further discussed and examined in view of new scientific evidence.

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7

The Assessment of Trade between Bosnia and Herzegovina and the Signatories of the CEFTA 2006 Agreement[1]

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Summary:

The CEFTA agreement, signed in 2006, with the ultimate goal of drawn in the SE European countries toward the EU. Bosnia and Herzegovina has signed the CEFTA Agreement in 2006, immediately after it took effect, gradually eliminating the agricultural and food import customs rates. Until the Croatia's EU accession, in the year 2013, Bosnia and Herzegovina traded in agricultural and food products mostly with the CEFTA 2006 signatories. After the Croatia's EU accession, because of the diminished Croatia's market, coupled with the shifts in statistical methodology, Bosnia and Herzegovina has a decrease in trade with CEFTA 2006 signatories. This paper aims at analysing and assessing the scope of trade between Bosnia and Herzegovina and the CEFTA 2006 member states. The results of analysis encompassing the 2005-2016 time period pointed to the manner in which the CEFTA 2006 agreement influences the trade of agricultural and food products made by Bosnia and Herzegovina. The analysis has also drawn attention to the fact that domestic producers and refiners, huge production potential notwithstanding, fail to meet the demands of the domestic market, due to the competition from abroad. A specific issue is the inability to export agricultural products, especially with regard to the EU market, caused by the lack of certified and / or licenced agricultural and food products, which all need to satisfy the EU's standards.

Keywords: international trade; CEFTA 2006 Agreement effects; agricultural, food
JEL codes: F18

1. INTRODUCTION

The agricultural sector is a significant component of the overall economic structure of Bosnia and Herzegovina. Slow and insufficient restructuring, low competitiveness of the domestic agricultural production, discrepancies between the existing legislation and the EU's standards, a non-functional and insufficiently institutionalised

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overall capacity, coupled with the absence of a unique agricultural policy at government level, have all served to put the agricultural and food industries of Bosnia and Herzegovina in an undesirable position (GTZ, 2001; Ćejvanović *et al.*, 2017).

Agricultural products hold a special place within the CEFTA 2006 Agreement framework, because the scope of the liberalization of agricultural products has been quite limited. Without a doubt, the CEFTA 2006 has influenced and shaped both the production and trade of agricultural products, as well as the overall adaptation to both the legislation and institutions, operating under the auspice of free market principles. Perhaps the key feature this particular agreement has brought about is the origination of the diagonal cumulating system, which enables incorporating components produced in any of the country within the zone, into the overall final product, without incurring additional customs charges at any stage. This is a good sign for foreign investors, because barriers created by numerous bilateral free trade agreements are being lifted.

2. FOREIGN TRADE IN AGRICULTURAL AND FOOD PRODUCTS OF BOSNIA AND HERCEGOVINA

Foreign trade implies the flow of goods and services among the trade participants or legal entities, with headquarters located in the territories of various differing member states. These activities are performed in accordance with the basic principles of each country's specific socio-economic relations. The relation to foreign countries is of great significance for every country, playing an important role in its economic activities (Unković, 2010, p. 163). In the modern world, no country is self-sufficient, regardless of its development potential or existing preconditions, especially with regard to overall economic status and development. It is therefore that all the countries are economically drawn toward each other, i.e. they are interconnected and in a state of mutual interdependency. The mere nature of both the economic principles and economic activity removes all the obstacles, including the international borders, even in the state when the countries are separated by political or other factors. The modern economic theory and practice both attach special importance to the international economic relations and foreign trade. The agricultural sector is a very relevant component in the overall economy hierarchy of Bosnia and Herzegovina. Slow and insufficient restructuring, coupled with low competitiveness of the domestic agricultural production, the discrepancies between current legislation and the EU standards, a non-functional and insufficiently institutionalised capacity, the absence of a unique agricultural policy at the governmental level, have all served to put the agricultural and food industry of Bosnia and Herzegovina in a most undesirable position (GTZ, 2001).

According to the statistical data, the agricultural production in Bosnia and Herzegovina has accounted for up to 9% of the overall GDP, depending on the year examined (BHAS, 2009). This index is more a consequence of recovery and consolidation of other economic industries and their growing contributions, than it is the result of the decline in agriculture. According to the data from the national statistics, the

agricultural production in Bosnia and Herzegovina had the annual agricultural production growth rate of 6%, for the 2005 to 2009 timeframe. The agricultural sector is also an important employment source for the country. According to the official data, the share of workers employed in agriculture is about 3% (BHAS, 2010). However, the data from a survey on labour supply in Bosnia and Herzegovina from the year 2009 shows that this number is much higher, reaching up to 21.2%.

The main reason for this apparent disparity remains in the number of semi-professional employees, engaged naturalistically in agriculture, an approach quite dominant in Bosnia and Herzegovina. Most of the agricultural estates are thus family-owned properties, primarily serving their owners' needs, with but a small portion of products placed on the local markets. When compared to the existing EU standards, it can be concluded that there is an overabundance of agricultural workers within the Bosnia and Herzegovina, characterized with very low productivity rates.[2] The educational structure of the employees, as well as the application of technologies in agriculture within Bosnia and Herzegovina is quite lower than the existing EU standards for member states.

For Bosnia and Herzegovina, the agriculture represents much more than the supposed primary economic sector. Regarding its strategic significance, it holds an important role in securing both the food supplies and the source of employment for the rural populace. Furthermore, the agriculture makes up the basis of the entire economic structure, as it is the source of raw materials for the industry. However, regardless of its mentioned significance, the participation of agriculture in the gross domestic product of Bosnia and Herzegovina has decreased during the last eleven years, dropping from 14% (in 2001) to 6.9% (in 2011). When compared to the other developing branches of the economy, a stagnatory trend is evident, with 45% of the arable land remaining unused, coupled with the low productivity, extensive production of fruit and vegetables, low average crop yields, low subsidies, etc. Additionally, the unfavourable weather conditions, which struck Bosnia and Herzegovina over the last few years, caused numerous problems for the sector, especially during 2012 and 2014, with negative influence on both the production levels and overall crop yield. Business entities dealing in agriculture and food production, operating within the Bosnia and Herzegovina, though having the potential to provide the domestic market with numerous products currently being imported are still unable to compete with the imports.

Local demand focuses on higher quality products, a more diverse supply, as well as the products that are safe have, so far, been ascribed to the products of foreign origin. The most critical issues of agricultural sector, which the domestic farmers have been facing for quite some time is the inability to export to foreign markets (especially holds true to the EU market), due to the overall lack of both the product certification and licensing.

[2] The productivity has been calculated based on the number of the employed and the added value within the EU member states and Bosnia and Herzegovina.

The policies dealing with the agricultural and food sector within the Bosnia and Herzegovina have been developing during the last years, in line with the preparations of accession to the EU. The activities conducted within the agricultural sector during the 2012 included the following:

- Development of the institutions dealing with food safety, primarily as a means of acquiring the EU export licences;
- Activities aimed at realising the possibility of utilising the IPARD funds;
- Implementation of the Proposition of Measures for Improving Business Activities in Agricultural Production and Food Industry in Bosnia and Herzegovina;
- Implementation of the Law on Agriculture, Food and Rural Development of Bosnia and Herzegovina;
- Fulfilling the obligations and priorities laid out by the Stabilization and Association Agreement for EU membership;
- Accepting the existing acquis and the development of a comprehensive strategy for its adaptation, within the sector of agriculture and rural development;
- Development of functional systems for the acquis implementation within the sector of food safety, with the overall aim of boosting the trade of agricultural products;
- Strengthening the capacity of official controls mechanisms within the sector of food safety, veterinary, phytosanitary issues, as well as those related to the genetically altered organisms;
- Starting the implementation of the approved projects from the IPA 2008 Programme, as well as IPA 2010 Programme;
- Signing and realization of bilateral agreements.

Although Bosnia and Herzegovina has signed a great number of bilateral agreements, as well as a multilateral agreement with neighbouring countries, the ineffective trade policy mechanisms, currently active in Bosnia and Herzegovina, have not led to a noticeable growth in export of agricultural or food products. At the same time, the agriculture of Bosnia and Herzegovina faces a number of other challenges, especially in the area of fulfilling the obligations to the EU, for the inevitability of accession requires adjustments and reforms of the entire agricultural sector.

Farmers and agricultural business entities, though having the potential of providing the domestic market with numerous products currently imported, are non-competitive with regard to price. Also, it is important to point out that the governmental agricultural subsidies are much lower than those in the surrounding countries.

Additionally, the lack of EU's certification and licensing of agricultural products is another long-term Bosnia and Herzegovina's problem, one ultimately hindering the export of high-quality agricultural goods. The key activity realised in the 2012 was the drafting of the sub-law documents, those under the "hygiene package", by which the Regulations 852/2004 (general food hygiene conditions), 853/2004 (special hygiene conditions of food of animal origin), 854/2004 (official control system of the food of animal origin) and 882/2004 (official controls of food, animal feed, health and animal welfare) were incorporated into the legislation of Bosnia and Herzegovina. The advice from the

government minister has brought a set of regulations of the so-called "hygiene package", with the aim of fulfilling the obligation of harmonizing the Bosnia and Herzegovina's ordinances with the European Union legislation, which were prepared by the Food Safety Agency and the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina. The adoption of the hygiene package, which coordinates the inspection and the control of food products of animal and/or plant origin is one of the key activities, which will facilitate the development of a system for food traceability and safety, i.e., it will set up a command chain in line with the EU standards and practices. However, it is also crucial to make the entire food safety system more efficient in the upcoming period and that this efficiency boost is recognized and acknowledged by the EU institutions. Adoption and implementation of the EU *Acquis Communautaire* legislation in the area of agriculture, rural development, veterinary, phytosanitary policy and food safety policy, as well as meeting the safety standards in the food trade are tasks of high priority and significance for the agriculture of Bosnia and Herzegovina, because they basically create the possibility of export activities and the placement of agricultural products on the wider EU market and the market of the Republic of Croatia. Additionally, creating the operative structure for the use of pre-accession aid for agriculture and rural development (IPARD) is equally important (MVTEO, 2016c, p. 59).

The goal set for Bosnia and Herzegovina consists of adopting the suitable policies, necessary for the development of agricultural sector, coupled with the active involvement of all the countries' relevant parties and the identification of the highly necessary compromises. All of this represents a necessity in creating the preconditions for utilising the EU's pre-accession funds intended for both the agriculture and rural development, which will further endorse and facilitate the inevitable changes and reforms, partially enhancing the competitiveness and the overall quality of the Bosnia and Herzegovina's products reaching the market.

The system of governmental aid has not yet been implemented in Bosnia and Herzegovina. It should strengthen the preconditions for a just competition environment within the country's market. The system of governmental oversight should be implemented in the short term, while the system of governmental control should be introduced in the medium term (which is also an obligation taken within the CEFTA 2006 Agreement). There is also a great concern present in the private sector, with regard to a coherent legal framework. The primary agricultural producers are thereby especially endangered: the proposition for the establishment of the Ministry of Agriculture and Rural Development was rejected for political reasons, which proves an existing lack of coordination on all the levels, as well as the lack of clear directions in politics, which is the main obstacle to the export of animals and food products to the EU. The chief obstacle for the Bosnia and Herzegovina's exporters is the inability of meeting the EU's sanitary and phytosanitary regulations. It should be also noted that the existing agreements and obligations have been accepted *ad hoc*, with a non-existing adequate preliminary effect estimations, as well as insufficient data (CEEFTA, 2009).

Confirmation of these claims can be found in the results of the application of the CEFTA 2006 Agreement, where foreign trade deficit has grown, due to the Agreement signed by only 8 countries within the area, which are only slightly more developed than Bosnia and Herzegovina. The logical questions therefore arise: What will happen when Bosnia and Herzegovina opens its borders to 28 EU members, all of which have strong agricultural subsidies? Will the Bosnia and Herzegovina's farmers even be able to cope with such strong competition, into which, at present, 43% of the total EU budget is invested, while the farmers in Bosnia and Herzegovina get a merely 3% stimulation from the budget? This holds true especially because the agricultural participation in the overall GDP has steadily declined over the last years. Before the war, Bosnia and Herzegovina met 60% of its demand for food products, while at present it barely covers for 11%. Import of production materials have increased significantly, with the foreign investments in agriculture making only 1.8% of the total direct investments. The agriculture budget accounts for mere 3-4% of the total public expenditures, which is in discordance with the fact that the rate of employment in agriculture reaches 18-20%[3].

To date, the application of the CEFTA Agreement reveals relevant areas where free access to trading is being disabled, regardless of the fact that customs barriers are being removed. Those are the areas of standardization, rules of products origin, fiscal and currency policy, the policy of supporting domestic production and the competition policy. The technical barriers in trade obstructs trade the most. The potential barriers Bosnia and Herzegovina's producers face are excise taxes on cigarettes, a ban on the export of cereals, a long-lasting and expensive analyses of the origin of goods, inspections of the facilities in Bosnia and Herzegovina by the CEFTA 2006 Agreement member states, as well as the customs value. Likewise, Bosnia and Herzegovina has been exposed to foreign agricultural competitors, all of which receive state subsidies.

3. FOREIGN TRADE IN AGRICULTURAL AND FOOD PRODUCTS, BEFORE THE CEFTA 2006 EGREEMENT CAME INTO EFFECT

In this section of the paper, the foreign Bosnia and Herzegovina's trade in agricultural products before the CEFTA 2006 Agreement came into effect will be analysed, i.e. the data from the years 2005, 2006 and 2007 will be presented. Table 1 showcases the foreign trade in agricultural products between the Bosnia and Herzegovina and other CEFTA 2006 member states. In order to compare the trends in agricultural trade between Bosnia and Herzegovina and the CEFTA 2006 member states, as well as those exchanges between Bosnia and Herzegovina and the rest of the World, the following tables will showcase the relevant data.

The data, with the corresponding analyses is shown for the period from 2005 to 2007, i.e. for the period before the Agreement (2005, 2006 and 2007).

[3] For details please visit www.mvp.gov.ba (10.09. 2016).

Table 1 displays the foreign trade in agricultural products between Bosnia and Herzegovina and other CEFTA 2006 members.

Table 1. The value of the total foreign trade in agricultural products between Bosnia and Herzegovina and other CEFTA 2006 members, before the Agreement came into effect

Year	Import (mil. KM)	Export (mil. KM)	Balance (mil. KM)	↓↑ Balance (%)
2005	851.36	154.42	-696.93	–
2006	891.81	178.75	-713.06	2.31
2007	1136.61	229.10	-907.51	27.27

Source: (Proceedings …., 2017, pp.123-127).

It is evident from the above table that the export of agricultural products from Bosnia and Herzegovina to the other CEFTA 2006 member states, in 2005, was valued at 154 420 000 KM. At the same time, the import of agricultural products into Bosnia and Herzegovina, from other CEFTA 2006 member states was valued at 851 360 000 KM. In 2006, the export value of agricultural products from Bosnia and Herzegovina into other CEFTA 2006 members in was valued at 178 750 000 KM and the import of agricultural products into Bosnia and Herzegovina from other CEFTA 2006 members was valued at 891 810 000 KM. The overall value of the exported agricultural products in 2007 was valued at 229 100 000 KM, while the imported value of such products was at 1 136 610 000 KM (Ćejvanović *et al.*, 2017, p. 124).

Table 2 showcases the foreign trade between Bosnia and Herzegovina and the World, for the 2005 to 2007 time period.

Table 2. Foreign trade between Bosnia and Herzegovina and the World for the 2005 to 2007 time period

Year	Import (mil. KM)	Export (mil. KM)	Balance (mil. KM)	↓↑ Balance (%)
2005	1981.63	223.30	-1758.32	–
2006	1944.94	258.76	-1686.18	-4.10
2007	2238.99	324.88	-1914.12	13.52

Source: (Ćejvanović et al., 2006, pp. 975-987).

From the above table, it is evident that the total export value of Bosnia and Herzegovina's agricultural products in 2005 was valued at 223 3000 000 KM. In 2005, the total import of agricultural products into Bosnia and Herzegovina was valued at 1 981 630 000 KM. In 2006, the total export of agricultural products from Bosnia and Herzegovina was valued at 258 7600 000 KM and the total import of agricultural products into Bosnia and Herzegovina was valued at 1 944 940 000 KM. The total export of agricultural products from Bosnia and Herzegovina in 2007 was valued at 324 880 000 KM, with the import of agricultural products amounting to 2 238 990 000 KM.

4. FOREIGN TRADE IN AGRICULTURAL AND FOOD PRODUCTS OF BOSNIA AND HERZEGOVINA, AFTER THE CEFTA 2006 AGREEMENT CAME INTO EFFECT

The international economic relations, especially the foreign trade, lead to an acceleration of global scientific, technical and technological developments, also impacting each country in unique ways (Unković, 2010, p. 103). At present, the innovations in science, techniques and technology are spreading rapidly throughout the World, therefore, the non-uniformities in technical and technological advances are being surpassed. In this particular manner, the contributions can be made to the overall acceleration of production development, as well as the global consumption. That process is significant for those countries that are not able to develop science and scientific research, as prerequisites for developing production. Both the foreign trade and international relations, in general, transfer knowledge from one part of the World to the other, with this knowledge encapsulated as new machines, production equipment, or products aimed at satisfying particular diverse needs (Hodžić, Ćejvanović, 2010, pp. 47-50). Without foreign trade, many countries could not afford to organise the production of such goods, enabled by either mass production or great capital investments. The foreign trade, or more precisely, the import and export of goods, influences the regulation of the relation between domestic supply and demand (Unković, 2010, p. 101, and pp. 106-114). The import serves to increases the scope of demand for goods in a particular market, i.e. it changes the overall supply structure, adapting it to the demand.

On the other hand, the export of goods and services decreases their individual supply within a particular market. Export enables the domestic production growth, above the level of market demand. Through foreign trade, the surpluses of a particular product are traded and exchanged for the products the domestic market's needs. This has positive effects on satisfying the society's demand and the overall economic stability. The absence of foreign goods from domestic markets, in turn, leads to the monopoly of domestic producers and has a detrimental effect on the market, as well as the production and consumption processes. The development of international economic relations has influenced the need for specialization in which, more or less successfully, all the countries in the World need to take part. The essence of this division lies in the need for each country to be specialized in the production of goods for which it possesses the most favourable economic preconditions, subsequently entering the global market with said products. Under those circumstances, it accomplishes above average global productivity, low production costs and a fast technical and technological product development cycle.

5. THE SCOPE OF FOREIGN TRADE IN AGRICULTURAL AND FOOD PRODUCTS AFTER THE CEFTA 2006 AGREEMENT CAME INTO EFFECT

In this section, the data on foreign trade of Bosnia and Herzegovina's agricultural and food products, after the CEFTA 2006 came into effect, i.e. the data for

the years 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015, will be presented. Table 7 showcases the total value of foreign trade between Bosnia and Herzegovina and the members of the CEFTA 2006 Agreement, after the Agreement entered into effect. For comparison, both the foreign trade and the importance of the CEFTA 2006 Agreement for the foreign trade of Bosnia and Herzegovina will be presented, with the data on the total flow of foreign trade for the analysed period, after the CEFTA 2006 Agreement came into effect.

The data in Table 7 clearly shows the value of the foreign trade in agricultural products between Bosnia and Herzegovina and other CEFTA 2006 members, for the period from 2008 to 2015. It is evident that the imports into Bosnia and Herzegovina from other CEFTA 2006 members was, more or less, on the same level during all the periods examined. There is a positive rising yearly trend of imports, for the analysed period from 2008 to 2015. Likewise, one other positive characteristic is that the foreign trade deficit had a dropping yearly trend (with the exception of the year 2010). An interesting piece of data is that there was a drop in foreign trade deficit between Bosnia and Herzegovina and the CEFTA 2006 Agreement members of 11.37%, between year 2012 and 2013.

Table 3. Value of foreign trade in agricultural products between Bosnia and Herzegovina and CEFTA 2006 Agreement members, after the Agreement entered into effect

Year	Import (mil. KM)	Export (mil. KM)	Balance (mil. KM)	↓↑ Balance (%)
2008	1240.00	304.38	-935.62	3.10
2009	1198.00	315.24	-882.76	-5.65
2010	1281.20	361.36	-919.84	4.20
2011	1344.14	446.16	-897.98	-2.38
2012	1271.88	440.36	-831.52	-7.40
2013	1269.20	505.28	-763.92	-11.37
2014	789.50	265.80	-523.70	-45.87
2015	855.48	283.24	-572.24	-8.48
2016	903.80	306.46	-597.34	-4.37

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2016).

Foreign trade in agricultural and food products between Bosnia and Herzegovina and other CEFTA 2006 members changed in 2014 and 2015. The reason for that is the Croatian full membership within the European Union, for the EU's foreign trade system framework is somewhat different from the CEFTA 2006 Agreement. Furthermore, the data from Table 3 significantly differs for 2014 and 2015, because of the differing statistical methodology. Namely, in 2014 and 2015, the foreign trade between Bosnia and Herzegovina and Croatia is recorded through the trade with the European Union, not with the CEFTA 2006 members (Ćejvanović *et al.*, 2017 p. 125).

Table 4 displays the import of agricultural products, for the analysed period. It can be concluded that the import of agricultural products remains relatively constant on a yearly basis, with only slight deviations and changes. The positive fact is that Bosnia and Herzegovina recorded a rise in the export of agricultural products

for the analysed period. So, the export in 2008 was valued at 410 100 000 KM, and in 2015 it reached the value of 817 630 000 KM, which equals to the growth of almost 99.37%. The foreign trade deficit for the period in question is slightly dropping, with some oscillations and a growth trend in 2011 and 2014.

Table 4. Foreign trade between Bosnia and Herzegovina and the World, for the 2008 to 2016 period

Year	Import (mil. KM)	Export (mil. KM)	Balance (mil. KM)	↓↑ Balance (%)
2008	2620.15	410.10	-2210.05	15.46
2009	2389.03	452.77	-1936.26	-12.39
2010	2502.40	553.08	-1949.32	0.67
2011	2769.95	612.20	-2157.74	10.69
2012	2733.22	655.75	-2077.47	-3,72
2013	2661.28	676.36	-1984.92	-4.45
2014	2751.81	649.34	-2102.47	-5.60
2015	2890.97	817.63	-2073.34	1.40
2016	2994.36	934.38	-2059.98	-0.64

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2016).

6. EXPORT OF AGRICULTURAL AND PRODUCTS AFTER THE CEFTA 2006 ENTERED INTO EFFECT

The CEFTA 2006 Agreement came into effect in the late 2007. Therefore, in this section of the paper, data on the import from Bosnia and Herzegovina into other CEFTA 2006 member states, after the Agreement came into effect, will be presented, i.e. the data on the export of agricultural products from Bosnia and Herzegovina into the CEFTA 2006 members, 2008 to 2015 time period.

In Table 5, the data on the export from Bosnia and Herzegovina into the CEFTA members for the period from 2008 to 2015 are displayed

Table 5. Value of the total export of agricultural products after the Agreement entered into effect

Year	Export (mil. KM) (CEFTA 2006)	↓↑ Export (%) (CEFTA 2006)	Export (mil. KM) (World)	↓↑ Export (%) (World)
2008	304.38	32.86	410.10	26.23
2009	315.24	3.57	452.77	10.40
2010	361.36	14.63	553.08	22.16
2011	446.16	23.47	612.20	10.69
2012	440.36	-1.29	655.75	7.11
2013	505.28	14.74	676.36	3.14
2014	265.80	-90.10	649.34	-4.16
2015	304.38	12.67	817.63	20.58

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2016).

Table 5 shows that the export from Bosnia and Herzegovina in 2008 was 304 380 000 KM. In 2009, the export of agricultural products was valued at 315 240 000 KM, with an increase in the export of agricultural products from

Bosnia and Herzegovina. In 2010, the export of agricultural products from Bosnia and Herzegovina was valued at 361 360 000 KM. In 2011, the export of agricultural products was 446 160 00 KM. The export of agricultural products in 2012 was 440 360 ,000 KM, while in the year 2013. it was 505 280 000 KM. After that, there is a dropping trend in export activities from Bosnia and Herzegovina to the CEFTA 2006 member states. The export of the CEFTA 2006 members in 2014 was 265 800 000 KM, which is a drop of 90%. The reason for this was the Croatian accession to the European Union and the application of a significantly differing export framework, vastly differing from the previous CEFTA 2006 Agreement.

After that, in 2015, there was an increase in exports from Bosnia and Herzegovina into the CEFTA 2006 member states, valued at 304 380 000 KM. The increase of export into the CEFTA members in 2015, compared to the year 2014, was at 12.67%.

Figure 1 showcases the movement of export of agricultural products from Bosnia and Herzegovina into the CEFTA 2006 members and the rest of the World, 2008 to 2015 timeframe.

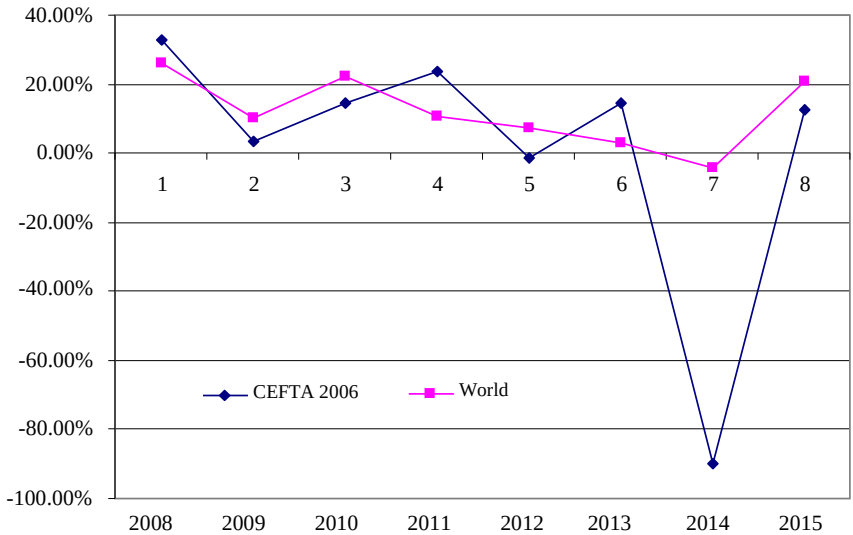

Figure 1. Export trend of agro products from Bosnia and Herzegovina into the CEFTA 2006 members and the rest of the World, 2008 to2015 timeframe
Source: own based on the data from the Bosnia and Herzegovina's Agency for Statistics (2017).

The trend of agricultural product exports for the 2008 to 2015 period is showcased in Picture 1. It is the period after the CEFTA 2006 Agreement came into effect. It also shows the trend of export from Bosnia and Herzegovina in the total agricultural product World trade for the 2008 to 2015 period. Oscillations are evident in the export from Bosnia and Herzegovina into the CEFTA 2006 Agreement member states, as well as the variations of exporting to other countries throughout the World.

7. IMPORT OF AGRICULTURAL PRODUCTS AFTER THE CEFTA 2006 AGREEMENT CAME INTO EFFECT

In this section, the data on the import after the CEFTA 2006 came into effect will be presented. It should be noted that the CEFTA 2006 Agreement has been in effect for almost nine years, with the option of utilising the said period in order to conduct a qualitative analysis. Table 6 displays the data on import into Bosnia and Herzegovina from the CEFTA 2006 member states, for the 2008 to 2015 timeframe.

Table 6. The value of imported agricultural products between Bosnia and Herzegovina and the CEFTA 2006 members, after the Agreement came into effect

Year	Import (mil. KM) (CEFTA 2006)	↓↑ Import (%) (CEFTA 2006)	Import (mil. KM) (World)	↓↑ Import (%) (World)
2008	1240.00	9.10	2620.15	17.02
2009	1198.00	-3.39	2389.03	-8.82
2010	1281.20	6.94	2502.40	4.75
2011	1344.14	4.91	2769.95	10.69
2012	1271.88	-5.37	2733.22	-1.32
2013	1269.20	-0.21	2661.28	-2.63
2014	789.50	-60.75	2751.81	3.30
2015	855.48	7.71	2890.97	4.81

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2017).

The import of agricultural products into Bosnia and Herzegovina from the CEFTA 2006 Agreement members was relatively constant for the 2008 to 2013 timeframe, with slight deviations occurring. In 2014, there was a drop in import from the CEFTA 2006 members. The reason has already been clarified – a different statistical methodology, due to the Croatian accession to the European Union. However, in 2015 the growth of import from the CEFTA 2006 members into Bosnia and Herzegovina was recorded. The growth in 2015, when compared to 2014, was 7.71%.

Figure 2 shows the import trend of agricultural products into Bosnia and Herzegovina from the CEFTA members and the rest of the World, for the analysed period.

Figure 2 shows the import trend of agricultural products for the 2008 to 2015 period, i.e. the time after the CEFTA 2006 Agreement came into effect. Likewise, the Picture 2 shows the import trend into Bosnia and Herzegovina of the total agricultural products in World trade, during the 2008 to 2015 timeframe. It is evident that the import trend had oscillations, especially in the year 2014, but this is basically due to the different statistical methodology utilised to record the imports from Croatia, the latest European Union member.

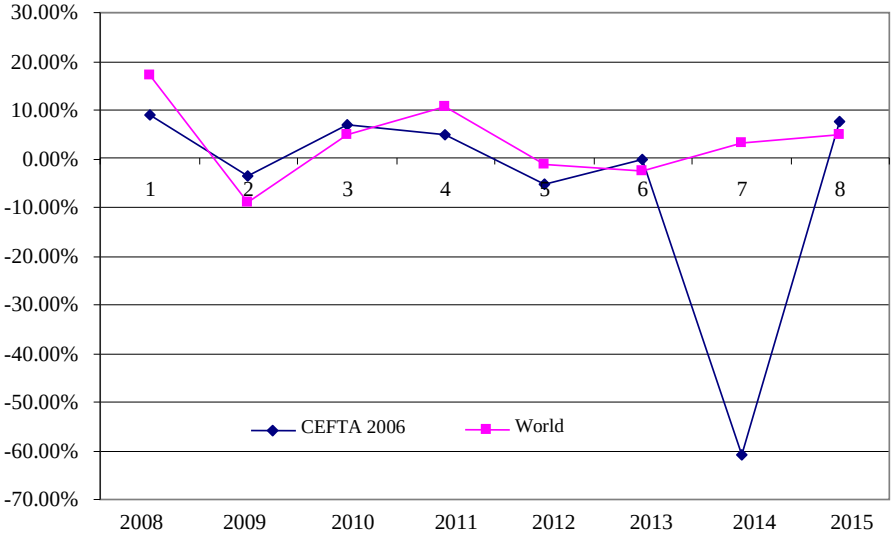

Figure 2. The import trend of agricultural products into Bosnia and Herzegovina from the CEFTA members and the rest of the World, for the 2008 to 2015 timeframe
Source: own based on the data from the Bosnia and Herzegovina's Agency for Statistics (2017).

8. THE FOREIGN DEFICIT OSCILATIONS OF AGRICULTURAL PRODUCTS, AFTER THE CEFTA 2006 AGREEMENT CAME INTO EFFECT

In the next section of this paper, the foreign deficit oscillations of agricultural products, after the CEFTA 2006 Agreement entered into effect will be presented, i.e. the data on the deficit for the period from 2008 to 2015. Table 11 presents the import-export relation (deficit) in the foreign trade between Bosnia and Herzegovina and the CEFTA 2006 Agreement members, for the period from 2008 to 2015.

Table 7. The value of foreign trade in agricultural products between Bosnia and Herzegovina and the CEFTA 2006 Agreement members, after the Agreement came into effect

Year	Import (mil. KM)	Export (mil. KM)	Balance (mil. KM)	↓↑ Balance (%)
2008	1240.00	304.38	-935.62	3.10
2009	1198.00	315.24	-882.76	-5.65
2010	1281.20	361.36	-919.84	4.20
2011	1344.14	446.16	-897.98	-2.38
2012	1271.88	440.36	-831.52	-7.40
2013	1269.20	505.28	-763.92	-11.37
2014	789.50	265.80	-523.70	-45.87
2015	855.48	283.24	-572.24	-8.48
2016	903.80	306.46	-597.34	-4.20

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2017).

Table 7 shows that the agricultural products trade deficit with the CEFTA 2006 members in 2008 was valued at -935 620 000 KM. In 2009, the deficit in agricultural product trade was -882,760,000 KM, which is the drop of 5.65%, compared to the year 2008. Year after year, there was evidence of a deficit drop (except for the year 2010). In 2013, the agricultural product trade deficit with the CEFTA 2006 Agreement member states was at -763 920 000 KM, with a deficit drop of 11.37%, when compared to year 2012. The foreign trade deficit between Bosnia and Herzegovina and the CEFTA 2006 Members dropped by almost 46%, but the deficit spilled over into the total foreign trade deficit. In 2015, there was an increase in deficit of 8.48%, when contrasted to the year 2014.

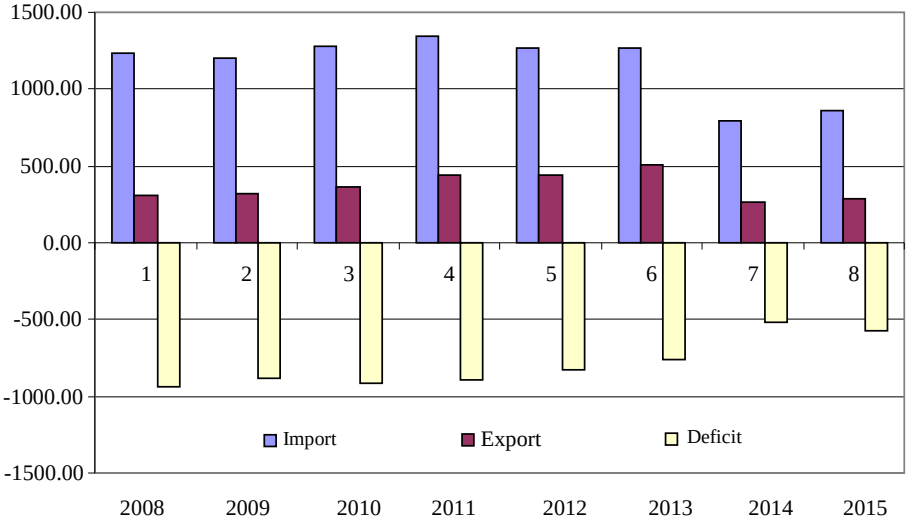

Figure 3. Foreign trade deficit within the CEFTA 2006 Agreement framework, for 2008 to 2015 timeframe
Source: (Ćejvanović et al., 2017, p. 125).

Figure 3 shows the import trend of agricultural products for the period from 2008 to 2015, i.e. the period after the CEFTA 2006 Agreement came into effect. Likewise, the Picture 7 shows the import trend into Bosnia and Herzegovina of the global overall agricultural products trade, for the period from 2008 to 2015. It is evident that the import trend had oscillations, especially in the year 2014, but this is basically due to the different statistics methodology used to record the import from Croatia, the latest European Union member state.

It is shown in Table 8 that the 2008 deficit in global agricultural products trade was valued at -2 210 050 000 KM. In 2010, the deficit was valued at -1 936 260 000 KM and there was a decrease of 12.39%, as evident when compared to 2008. In 2013, the deficit in agricultural products trade with the World was -1 984 920 000 KM and there was a drop of deficit by 4.45%, when compared to 2012. In 2014, the deficit increased by 5.6%, when compared to 2013, while in 2015, there was a drop in deficit of 1.4%, when compared to 2014.

Table 8. Import-export relation (deficit) of agricultural products between Bosnia and Herzegovina and the World, from 2008 to 2015

Year	Import (mil. KM)	Export (mil. KM)	Balance (mil. KM)	↓↑ Balance (%)
2008	2620.15	410.10	-2210.05	15.46
2009	2389.03	452.77	-1936.26	-12.39
2010	2502.40	553.08	-1949.32	0.67
2011	2769.95	612.20	-2157.74	10.69
2012	2733.22	655.75	-2077.47	-3.72
2013	2661.28	676.36	-1984.92	-4.45
2014	2751.81	649.34	-2102.47	-5.60
2015	2890.97	817.63	-2073.34	1.40

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2016).

Figure 4 shows the import and export of agricultural products between Bosnia and Herzegovina and the World after the CEFTA 2006 Agreement came into effect. Picture 8 displays slight deviations and the fact that there are no major oscillations in agricultural and food product foreign trade between Bosnia and Herzegovina and the World.

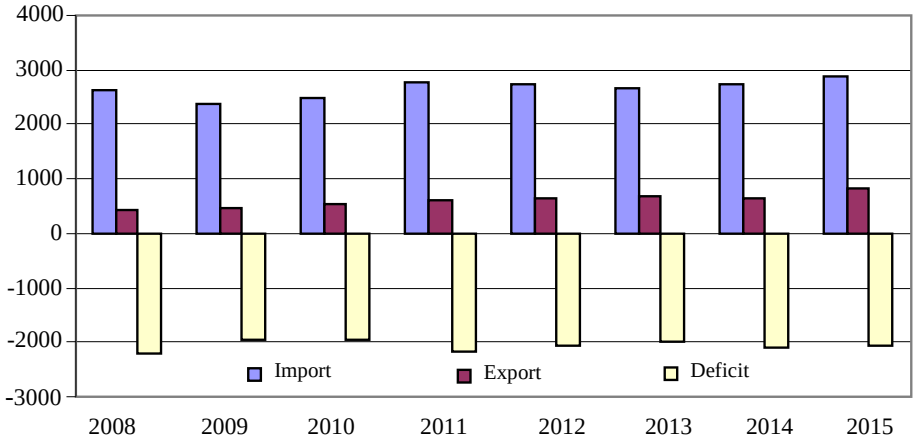

Figure 4. The diagram of foreign trade deficit between Bosnia and Herzegovina and the World, for the period from 2008 to 2015

Source: own calculations based on the data from the Bosnia and Herzegovina's Agency for Statistics (2016).

9. CONCLUSIONS

Under modern economic conditions, characterized by the growing importance of foreign trade between the various countries, a country's relation to international environment assumes the ever-increasing importance for achieving the economic growth.

The research carried evaluates the trade effects of agricultural and food products between Bosnia and Herzegovina and the CEFTA 2006 Agreement signatories. The foreign trade effects, as well as the overall foreign trade policies directly influence both the economic development and Bosnia and Herzegovina's economic

state. The agricultural foreign trade policy of Bosnia and Herzegovina has to comply with the overall globalization process of trade liberalization.

Through the analysis of agricultural and food product exports for the 2005 to 2013 time period, it can be concluded that there exists a definite, gradual growth trend. Also, the drop in exports in the years 2014 and 2015 is noticeable, but only as a result of a change in status of specific CEFTA 2006 Agreement member states, with a particularly important example of the Republic of Croatia, which became a full EU member in 2013. This has reflected on the drop in exports, because of the specific statistical methodology. Namely, since Croatia's accession to the EU, the trade with Croatia is no longer recorded as a trade with CEFTA 2006 Agreement signatory. By analysing the Bosnia and Herzegovina's agricultural and food exports to the CEFTA 2006 members, it can be concluded that the condition has improved, with the greatest export-import coverage ratio at 39,81% in the year 2013.

By analysing the Bosnia and Herzegovina's imports of agricultural and food products hailing from the CEFTA 2006 Agreement states, it can be concluded that, overall, Bosnia and Herzegovina primarily imports such products. For the analysed period of 2008-2016, an increase of imports into Bosnia and Herzegovina is evident. It is favourable, however that the import rates are rising at a lower rate than export rates, which in time contributes to the deficit decrease. Overall, Bosnia and Herzegovina has a negative foreign agricultural and food trade deficit, primarily due to the fact that this country imports the needed products.

Bosnia and Herzegovina has very low economic indicators when compared to the regional average. It has a high deficit in agricultural products foreign trade, low import coverage by exports, as well as the weak impact of exports in forming the gross domestic product.

Based on the data from this research, it can be concluded that Bosnia and Herzegovina has the most liberal trade framework of the region. This research demonstrates that the CEFTA 2006 Agreement has had impact on the foreign trade in agricultural products between Bosnia and Herzegovina and the rest of the CEFTA 2006 members, for the analysed period (2005-2016). Conclusion can be made that foreign trade in agricultural products between Bosnia and Herzegovina and other signatories of the Agreement directly influences the overall agricultural production in Bosnia and Herzegovina.

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8

The Role of FDI in Development of the Services Export of the Host Country: A Case of Poland[1]

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Summary:

The goal of the article is to analyze international trade in services of the entities with foreign capital operating in Poland. It also attempts to evaluate the role of those companies in international trade of services of Poland. One of the consequences of the FDI inflows is a significant participation of the entities with foreign capital in Polish trade with abroad. The trade of these companies has been the subject of numerous analytical studies for many years, yet so far these studies have been focused, to a large degree, on merchandise trade carried out by such entities. However, the structure of foreign investors' involvement in Poland, with a dominating share of service sector, and also a significant role of foreign entities in the Polish services' sector as well as a dynamic growth of Polish trade in services in general provoke a question about the condition and directions of development of international trade of services provided by foreign investors and the significance of this development for the Polish export of services. In the research, the author employed the analytical descriptive method with the use of published sources and statistical data of the Central Statistical Office of Poland, covered by NACE sections, available in its annual publications. In 2009-2015 the entities with foreign capital made up an important share of the enterprises carrying out export activity and generated more than a half of the income from the enterprises' total export of services. The turnover of these enterprises, export in particular, still have a large potential of growth. There is a need to carry out an in-depth research of the export of services stimulated by the FDI movement, and, in particular, this research should concentrate on the creation of specialisation and competitive advantage in the export of the services of a host country.

Keywords: trade in services; foreign direct investment; Poland; entities with foreign capital; export competitiveness
JEL codes: F13, F14, F55

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1. INTRODUCTION

One of the consequences of the inflow of foreign direct investments in Poland, is a significant participation of the entities with foreign capital in Polish trade with abroad. The development of the trade exchange between foreign companies carrying business in Poland and the companies abroad has been the subject of numerous analytical studies for many years, yet so far these studies have been focused, to a large degree, on merchandise trade carried out by such entities (Chojna, 2010; Bombińska, 2013, Zysk, 2013; Maciejewski, 2015). However, the structure of foreign investors' involvement in Poland, with a dominating share of service sector, and also a significant role of foreign entities in the Polish services' sector (Bombińska, 2014; Chojna, 2016) as well as a dynamic growth of Polish trade in services in general (NBP, 2016b; NBP, 2015c), provoke a question about the condition and directions of development of international trade of services provided by foreign investors and the significance of this development for the Polish export of services. This paper attempts to answer these questions.

The paper consists of five parts. The introduction, referring to the economics theory, discusses the relationships between the FDI flows and the trade in services of the host country. Then the article presents the characteristics of the main tendencies concerning the FDI inflows into the sector of services in Poland. The next parts focus on the analysis of the size and structure of the international trade in services of the foreign enterprises operating in Poland and a discussion of the competitiveness of their export. The article is summarised with an attempt of evaluation of the participation of foreign enterprises in the Polish trade in services.

In the research, the author employed the analytical descriptive method with the use of published sources and statistical data of the Central Statistical Office of Poland, covered by NACE sections, available in its annual publications (GUS 2016a, GUS 2016b). The availability of the statistical data determined the author's selection of the years 2009-2015 to be the study period and also led to the fact that the research did not concern the entities operating in such sectors as banking, brokering and insurance, investment or universal pensions funds, higher education institutions, independent public healthcare centres and cultural institutions with legal personality. The lack of available statistics made it also impossible to make a complete evaluation of the role of foreign entities in Poland's international trade in services: the research was limited only to export, and it did not include the entities in which the number of employees was less than 10 persons.

2. THE EFFECT OF FDI ON THE EXPORT OF THE HOST COUNTRY – SELECTED THEORETICAL ASPECTS

The current scientific output with regards to the theories describing the influence of FDI on the international trade lacks any concise and logical concept explaining the mechanism of interrelations between foreign direct investments and trade in services of the countries which are hosts to these investments (Welsum, 2003b). It

seems that such a state of affairs has two fundamental causes. First of all, there is no uniform and internally coherent theory of international exchange of services (Welsum, 2003a; Misala, 2005; Hoekman, 2006). Secondly, the theoretical considerations and numerous empirical research in this area, analysing the relationships between FDI and international trade have been mainly focused on the merchandise trade (Welsum, 2003b; Bombińska, 2012; Salamaga, 2013).

The formulation of uniform and coherent theory of international trade in services is thus an extremely difficult task, for example, because of the lack of one generally accepted definition of services, lack of consent concerning the criteria and principles of division of services, as well as the lack of appropriate statistical data covering all possible forms of international service trade as listed by GATS (Rajan and Bird, 2002; Lipsey, 2009; Pattanaik, 2010). These forms, distinguished with regards to the manner of rendering services, include: (i) cross-border services, (ii) consumption abroad, (iii) commercial presence and (iv) the presence of individuals. This means that international trade in services is identical with more or less "hidden" mobility of factors of production; whilst providing some services, requires international flow of these factors, service providers or service recipients and, in particular, the capital. As a result, only some part of international trade in services may be explained on the basis of international trade theories, whereas a complete description of the phenomenon of international service flows needs to be enriched with theoretical concepts concerning international migration of mobile production resources. This point of view is presented by Sapir and Lutz (1981), Hindley and Smith (1984), Bhagwati (1987), Stern and Hoekman (1987) as well as Stibora and Vaal (1995).

Within the research describing international trade in services with the use of the theory of international trade, there are some issues which require special attention, namely: (i) with respect to the heterogeneity of services there is no single theory of merchandise trade which could entirely describe all service transactions (Richardson, 1987; Misala, 2005; Mongidajło, 2007; Nyahoho, 2010); (ii) these theories may solely be used for the explanation of the flows of cross-border services, as, in majority, they assume that there is no mobility of factors of production (Sampson and Snape, 1985; Feketekuty, 1988); (iii) there is a need of joint analysis of commodity and service trade, as often it is difficult to distinguish goods from rendering a service (Stibora and Vaal, 1995; Li, Whalley and Chen, 2015). There have also been some attempts made at formulating the general models of international services trade, and among them the most well-known are models created by Deardorff (1985), Melvin (1989) and Stibor and Vaal (1995).

With regards to the relationships between FDI and international trade, theoretical concepts and empirical studies concentrate – as it was already mentioned – on the commodities' trade, and so the basic problem quoted by the authors of these theories boils down to the question whether foreign investments and international trade complement or substitute each other (Liu, Burridge and Sinclair 2002; Caetano and Galego 2007; Bezuidenhout and Naude, 2008). Table 1 presents selected theories and models describing the effect of FDI on merchandise trade with the results of their interrelations. As for the empirical studies analysing the relationships between FDI

and international trade in services – most of them prove that FDI have positive influence on the growth of services export in the host country (Li, Moshirian and Sim, 2003; Srivastava, 2006; Sichei, Harmse and Kanfer, 2007; Lennon, 2008).

Table 1. Selected theories and models describing the effect of FDI on international trade

Theory/model	FDI and trade interrelations
Mundell(1957) Krauss (1974)	substitutable
Schmitz and Helmberger (1970) Markusen (1983)	complementary
Kojima (1975)	substitutable (when FDI are located in the branches comparatively beneficial) or complementary character (when FDI are located in the branches comparatively disadvantageous)
Krugman (1990)	substitutable (with horizontal FDI) or complementary character (with vertical FDI)
Ozawa (1992)	complementary character from the point of view of the entire economy, and related to particular business sector: complementary or substitutable depending on development phase of the economic development and of a specific branch of products
Fukao, Ishido and Ito (2003)	complementary or substitutable character depending on the level of investment costs and the costs of foreign trade

Source: own elaboration.

3. THE INFLOW OF DIRECT FOREIGN INVESTMENTS TO THE SERVICES SECTOR IN POLAND

For many years the services sector has been the dominating location of foreign direct investments coming to Poland (Figure 1): out of the capital of more than 150 billion USD invested in 2005-2015 in Poland as FDI, more than 88 billion USD (making up its 59%) was located in the services sector. In the specific years of that period, this share varied between 36% (in 2010) and 73% (in 2015).

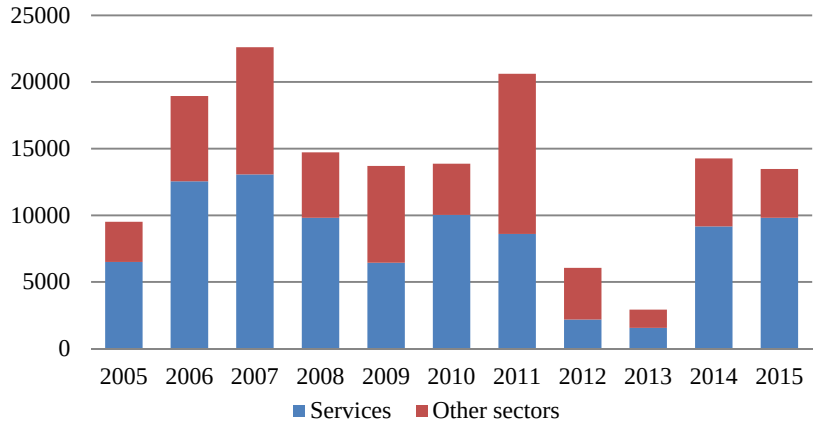

Figure 1. Foreign direct investment in Poland (inflows), 2005-2015 (mln USD)
Source: own elaboration based on (NBP 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015a, 2015b, 2016).

The value of the foreign capital coming to the Polish sector of services in 2005-2015 underwent large fluctuations: after an increase trend lasting till 2007 (with the record value of this inflow amounting to 13 billion USD in 2007), the period of 2008-2009 brought a significant decrease of the flow of direct capital located in services (and also in other sectors of the Polish economy) to the level of almost 6.5 billion USD in 2009. An increase of the value of this inflow in the year that followed (to more than 10 billion USD) had only transitional character as from 2011 onwards, the flow of FDI located in the Polish services' sector began to decrease again, and, in 2012-2013 its sudden downturn was observed, as it reached the levels of 2.18 billion USD and 1.56 billion USD[2] respectively. This decrease, seen also in the segments of the Polish economy which were not related to services (Figure 1), was caused first of all by an increasing tendency to withdraw the capital shares (which was partly connected with the phenomenon of "capital in transit"), whilst the value of other constituents of the inflows, i.e. reinvested profits and the remaining capital underwent in 2011-2013 either some slight decrease or was increasing (Figure 2). The withdrawal of capital shares concerned only some sections of services, among which the largest scale in 2011 concerned the Information and Communication sector (-4.1 billion USD), in 2012 – Professional, Scientific and Technical Activities (-5.37 billion USD), and in 2013 – Financial and Insurance Activities (-7.97 billion USD). In the two last years of the above period, there has been a dynamic growth of the capital inflow to the services sector, reaching the amount of 9.2 billion USD in 2014 and 9.8 billion USD in 2015.

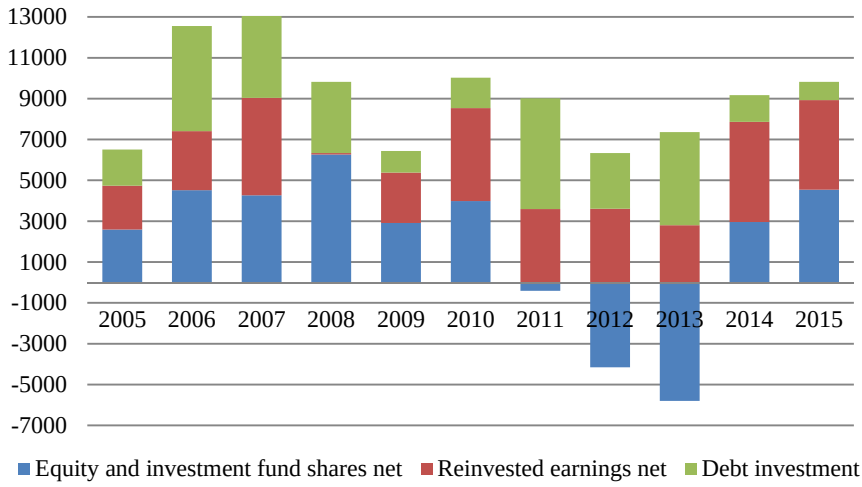

Figure 2. Foreign direct investment in service sector in Poland (inflows), 2005-2015 (mln USD)
Source: own elaboration based on (NBP 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015a, 2015b, 2016).

[2] The data 2013 are not directly comparable with the data from the preceding year with regards to the changes in the methodology of presentation of the data concerning BIZ adopted by NBP. These changes result from the introduction of the new OECD standards concerning drafting the statistics of direct investments based on BPM6. (IMF, 2009).

The accumulated value of the foreign capital invested in the sector of services in Poland, is characterised, in the breakdown of NACE sections, by gross differentiation and a large degree of concentration (Table 2). The largest FDI value was located in Financial and Insurance Activities and Wholesale and Retail Trade- in 2015 these two sections received almost 60% of the FDI resources in the Polish sector of services. The thing which draws particular attention is a significant decrease (by 7.3 percentage points) of the Financial and Insurance Activities share between 2010 and 2015 to be relocated in three other NACE sections, namely: Real Estate Activities, Professional, Scientific and Technical Activities and Information and Communication. In 2015, these sections received 13.4%, 11.7% and 9.4% of the cumulated FDI value, invested in the Polish services sector respectively.

Table 2. FDI stock in service sector in Poland, broken down by economic activity of the direct investment enterprise (NACE sections), 2010-2015

Economic activity by NACE sections	Inward stock (mln USD)		Share in FDI inward stock (%)	
	2010	2015	2010	2015
Total services	128 719.7	107 132.7	100	100
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	33 454.3	27 838.4	26.0	26.0
Transportation and Storage	2886.7	3046.3	2.2	2.8
Accommodation and Food Service Activities	1140.1	1056.1	0.9	1.0
Information and Communication of which:	10 234.2	10 101.3	8.0	9.4
telecommunications	6460.7	4785.1	5.0	4.5
Financial and Insurance Activities	50 633.5	34 335.4	39.3	32.0
Real Estate Activities	14 226.9	14 356.4	11.1	13.4
Professional, Scientific and Technical Activities	13 042.0	12 504.6	10.1	11.7
Administrative and Support Service Activities	2614.0	2715.7	2.0	2.5
Education	13.5	9.5	0.0	0.0
Human Health and Social Work Activities	265.0	762.1	0.2	0.7
Arts, Entertainment and Recreation	75.4	268.3	0.1	0.3
Other Service Activities	99.6	115.4	0.1	0.1

Source: own elaboration based on (NBP 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015a, 2015b, 2016).

4. THE VALUE AND STRUCTURE OF INTERNATIONAL TRADE IN SERVICES OF THE ENTITIES WITH FOREIGN CAPITAL

In the international trade of the enterprises with foreign capital operating in Poland, the merchandise trade is dominating (Figure 3 and Figure 4). In 2009-2015 the share of services in export sale as well as in the import of the analyzed enterprises was systematically growing, yet it was running at a low level – below 15% in the exports and 12% in imports.

In the analysed period, the turnover of the international trade in services of the enterprises with foreign capital was characterised by an increasing trend: in 2015 in comparison with 2009 the value of their service export in total was by 120% larger,

whilst the import increased by 68% (Table 3). In the breakdown of the NACE sections the change of the service turnover was characterised by large differentiation, yet – as it is seen from Table 3 – the dominating part of the sections was characterised by an increase of the value of services export and also of their import.

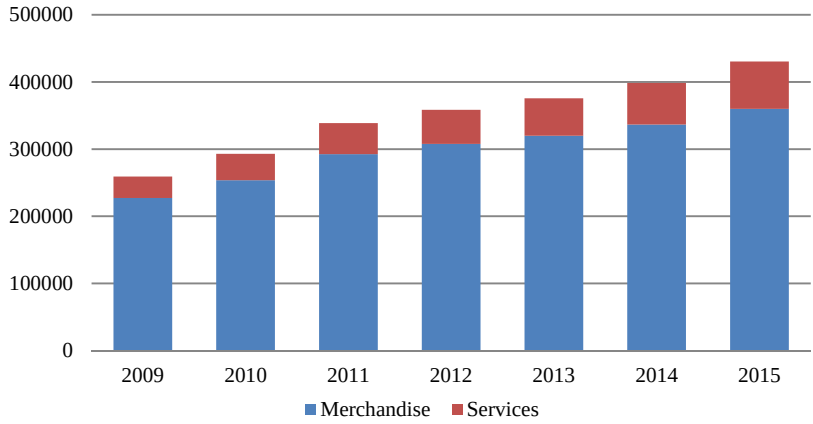

Figure 3. Exports value of entities with foreign capital, 2009-2015 (mln PLN)
Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a).

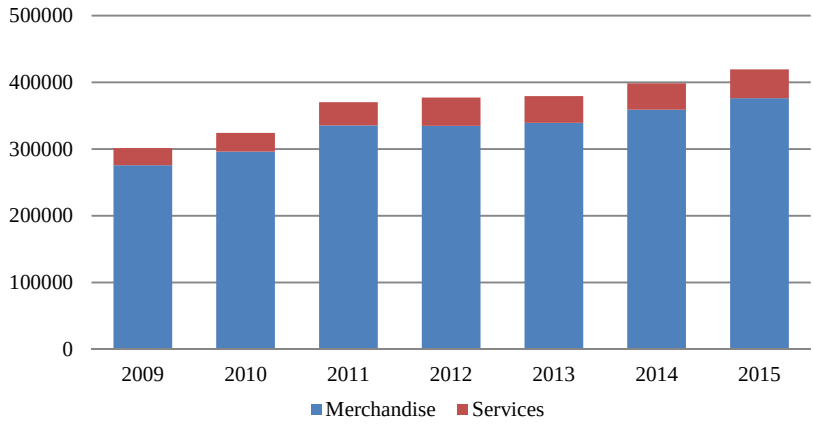

Figure 4. Imports value of entities with foreign capital, 2009-2015 (mln PLN)
Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a).

What requires special notice is a significantly lower – in export in particular – dynamics of the merchandise trade of foreign enterprises in comparison with their turnover in services (Table 4). Moreover, as opposed to the commodity exchange, the balance on trade in services of the studied entities was positive and – with the exception for 2012 – it was gradually growing both as far as absolute change (from 6.2 billion

PLN in 2009 to more than 27.2 billion PLN in 2015), and relative change – in relation to the export value (from 16.3% in 2012 to more than 38% in 2015) were concerned.

Table 3. Value of service exports and imports in trade of entities with foreign capital broken down by NACE sections, 2009-2015 (mln PLN)

Specification	Exports of services				Imports of services			
	2009	2011	2015	2015	2009	2011	2015	2015
	mln PLN			2009=100	mln PLN			2009=100
Total	31 988	46 251	70 411	220	25 756	34 800	43 151	168
Agriculture, forestry and fishing	33	98	213	648	45	127	70	155
Mining and quarrying	9	54	86	1001	79	316	102	130
Manufacturing	7673	12 923	18 449	240	10 060	12 998	18 233	181
Electricity, gas, steam and air conditioning supply	211	219	81	38	641	438	1332	208
Water supply; sewerage, waste management and remediation activities	79	32	23	29	34	54	59	172
Construction	1095	1307	1773	162	972	1254	859	88
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	3073	4352	7429	242	4087	5772	5970	146
Transportation and Storage	8750	12 134	16 379	187	2050	4388	5942	290
Accommodation and Food Service Activities	11	63	34	312	157	502	97	62
Information and Communication	3615	5610	10 981	304	4369	4530	5656	129
Financial and Insurance Activities	522	756	656	126	257	1176	1198	466
Real Estate Activities	36	104	247	692	598	730	475	79
Professional, Scientific and Technical Activities	5553	6582	11 009	198	1455	1580	2070	142
Administrative and Support Service Activities	840	1604	2187	260	883	644	782	89
Education	16	19	41	256	8	12	11	132
Human Health and Social Work Activities	28	51	124	451	7	21	35	538
Arts, Entertainment and Recreation	5	14	38	844	5	197	173	3258
Other Service Activities	441	331	662	150	48	61	88	183

Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a).

Table 4. Exports, imports and trade balance of entities with foreign capital, 2009-2015 (mln PLN)

Specification	2009	2010	2011	2012	2013	2014	2015	2015 2009 = 100
Services								
Exports (mln PZL)	31 988.0	39 354.0	46 251.0	50 747.0	55 734.0	61 835.7	70 411.1	220
Imports (mln PZL)	25 756.0	28 185.0	34 800.0	42 483.0	39 942.0	39 663.8	43 150.5	168
Balance (mln PZL)	6232.0	11 169.0	11 452.0	8263.0	15 791.0	22 171.9	27 260.6	437
Balance/exports (%)	19.5	28.4	24.8	16.3	28.3	35.9	38.7	199
Merchandise								
Exports (mln PZL)	227 133.0	253 668.0	292 481.0	307 880.0	319 879.0	336 626.9	360 063.7	159.0
Imports (mln PZL)	275 638.0	296 044.0	335 511.0	334 706.0	339 355.0	359 007.7	376 168.5	136.0
Balance (mln PZL)	-48 504.0	-42 376.0	-43 030.0	-26 826.0	-19 476.0	-22 380.8	-16 104.8	33.0
Balance/exports (%)	-21.4	-16.7	-14.7	-8.7	-6.1	-6.6	-4.5	20.9

Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a).

In the study period, the service exchange with abroad carried out by foreign entities, broken down by the NACE sections, was characterised by a high degree of

concentration (Table 5). The export was carried out in more than 90% by the entities operating in only five sections: Manufacturing (with a share of 26.2% in services export in total) Transportation and storage (24.7%), Professional, scientific and technical activities (15.6%), Information and communication (15.6%) and Trade and repair (10.2%). Exactly the same NACE sections, yet in a different sequence, were responsible for more than 80% import of services of the studied entities. Their shares in 2015 amounted to: Manufacturing 42.3%, Trade and repair-13.8%, Transportation and storage – 13.8%, Information and communication-13.1% and Professional, scientific and technical activities – 4.8%.

Table 5. Service exports and imports of entities with foreign capital broken down by NACE sections, 2009-2015 (%)

Specification	Exports				Imports			
	2009	2011	2013	2015	2009	2011	2013	2015
Total	100	100	100	100	100	100	100	100
Agriculture, forestry and fishing	0.1	0.2	0.1	0.3	0.2	0.4	1.1	0.2
Mining and quarrying	0.0	0.1	0.2	0.1	0.3	0.9	0.8	0.2
Manufacturing	24.0	27.9	24.4	26.2	39.1	37.4	36.6	42.3
Electricity, gas, steam and air conditioning supply	0.7	0.5	0.1	0.1	2.5	1.3	2.0	3.1
Water supply; sewerage, waste management	0.2	0.1	0.0	0.0	0.1	0.2	0.1	0.1
Construction	3.4	2.8	3.4	2.5	3.8	3.6	2.9	2.0
Trade; repair of motor vehicles	9.6	9.4	10.2	10.6	15.9	16.6	13.5	13.8
Transportation and storage	27.4	26.2	24.7	23.3	8.0	12.6	13.9	13.8
Accommodation and Food Service Activities	0.0	0.1	0.1	0.0	0.6	1.4	1.4	0.2
Information and communication	11.3	12.1	12.7	15.6	17.0	13.0	12.5	13.1
Financial and insurance activities	1.6	1.6	2.5	0.9	1.0	3.4	4.3	2.8
Real estate activities	0.1	0.2	0.3	0.4	2.3	2.1	1.8	1.1
Professional, scientific and technical activities	17.4	14,2	16.3	15.6	5.6	4.5	5.0	4.8
Administrative and support service activities	2.6	3,5	3.9	3.1	3.4	1.8	3.6	1.8
Education	0.1	0,0	0.0	0.1	0.0	0.0	0.0	0.0
Human health and social work activities	0.1	0,1	0.1	0.2	0.0	0.1	0.1	0.1
Arts, entertainment and recreation	0.0	0,0	0.0	0.1	0.0	0.6	0.2	0.4
Other service activities	1.4	0,7	0.9	0.9	0.2	0.2	0.3	0.2

Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a).

5. THE COMPETITIVENESS OF THE EXPORT OF SERVICES OF THE ENTERPRISES WITH FOREIGN CAPITAL

The analysis of the competitiveness of the export of services of foreign entities will be carried out on the basis of the Trade Coverage (TC) and Revealed Comparative Advantage (RCA) ratios. The selection of ratios and their formulas, used for the analysis, was determined by the availability of the statistical data. The ratio of the domestic coverage service import by the domestic export of this service is expressed by the following formula:

$$TC_i = \frac{x_i}{m_i} \cdot 100$$

whilst the RCA ratio was determined with the use of the formula:

$$RCA_i = \frac{x_i}{X} / \frac{m_i}{M}$$

where:

x_i - exports value of i service;
m_i - imports value of i service;
X - service exports value total;
M - service imports value total.

The comparative advantage is obtained in the case of the section for which the TC ratio has the values above 100; in the case of the application of the RCA formula, the value of the ratio above 1 proves the competitiveness in trade. The results of the calculations are presented in Table 6. The distribution of the TC and RCA ratio shows, in the entire analyzed period, the presence of a large comparative advantage in the services trade carried out by foreign entities operating in the following sections: Other service activities, Professional, scientific and technical activities, Human health and social work activities, Transportation and storage, Construction, Education and Administrative and support service activities. Moreover, in the last three years of the study period, the advantage was gained by the entities operating within the Information and communication section. The sections which do not have a competitive advantage in services trade are Manufacturing and Trade and Repairs, with a large share of in the export of the entities with foreign capital.

6. THE SHARE OF FOREIGN ENTITIES IN THE POLISH EXPORT OF SERVICES

The evaluation of the share of foreign entities in the Poland's international trade of services is difficult due to the lack of comparative statistical data concerning the trade exchange carried out by foreign and domestic entities. The annual publications of the Central Statistical Office of Poland concerning the activity of the entities with foreign capital (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a), beginning from 2010, show – in the breakdown of the NACE sections – the trade values of these companies, as divided into merchandise and services trade. At the same time, the publications concerning the commercial activity of all the entities (with the number of employees above 9) (GUS 2010b, 2011b, 2012b, 2013b, 2014b, 2015b, 2016b) reduce the statistics concerning their trade in the NACE sections, only to the export without the disaggregation of its total value into commodity and services export.

In this situation an attempt was made to estimate the share of foreign entities in the Polish export of services, with a simplifying assumption that the subject of export of the NACE services section comprises solely services, whilst such sections as: Agriculture, forestry and fishing, Mining and quarrying, Manufacturing, Electricity, gas, steam and air conditioning supply and Water supply; sewerage, waste management export only the commodities. Additionally, the value of the export sales carried out by the services sections should be decreased by the export of the Trade; repair of motor vehicles section, as it might be supposed that it consists mainly in the export

of goods carried out through trading companies. The participation of foreign entities in the Polish export of services in total and in the breakdown of the NACE sections, calculated in the above way, is presented in Table 7.

It is seen from the presented statistics that foreign entities play a very significant role in the Polish export of services. Within the specific years of the 2009-2015 period they made up more than 40% of service companies (without Trade; repair of motor vehicles) carrying out export activity, and generating more than a half, and in 2015, almost 62% of the value of their income from the export. What is significant for the service sections in general, the participation of the studied group in the period between 2009 and 2015 increased both with regards to the number of exporting entities and the value of export of services. In some NACE sections, such as Other service activities, Arts, entertainment and recreation, Professional, scientific and technical activities, Information and communication, Financial and insurance activities, Administrative and support service activities – these entities had a dominating position in the export activity, generating in specific years of the study period from 70% to more than 90% of the total income from exported services.

Table 6. Trade in services of entities with foreign capital – Trade Coverage (TC) and Revealed Comparative Advantage (RCA) ratios broken down by NACE sections, 2009-2015

NACE sections	TC							RCA						
	2009	2010	2011	2012	2013	2014	2015	2009	2010	2011	2012	2013	2014	2015
Agriculture, forestry and fishing	73	**168**	77	**195**	14	85	**305**	0.59	**1.20**	0.58	**1.63**	0.10	0.55	**1.87**
Mining and quarrying	11	12	17	26	35	56	84	0.09	0.09	0.13	0.21	0.25	0.36	0.52
Manufacturing	76	**107**	99	87	93	94	**101**	0.61	0.77	0.75	0.73	0.67	0.60	0.62
Electricity, gas, steam and air conditioning supply	33	68	50	53	10	30	6	0.27	0.49	0.38	0.44	0.07	0.19	0.04
Water supply; sewerage, waste management	**232**	90	59	35	19	84	39	**1.87**	0.64	0.45	0.30	0.13	0.54	0.24
Construction	**113**	**139**	**104**	**149**	**164**	**131**	**206**	0.91	**1.00**	0.78	**1.24**	**1.17**	0.84	**1.27**
Trade; repair of motor vehicles	75	90	75	**106**	**106**	94	**124**	0.61	0.64	0.57	0.89	0.76	0.60	0.76
Transportation and storage	**427**	**249**	**277**	**233**	**248**	**293**	**276**	**3.44**	**1.78**	**2.08**	**1.95**	**1.78**	**1.88**	**1.69**
Accommodation and Food Service Activities	7	12	13	34	6	21	35	0.06	0.08	0.09	0.28	0.04	0.13	0.21
Information and communication	83	98	**124**	72	**141**	**190**	**194**	0.67	0.70	0.93	0.60	**1.01**	**1.22**	**1.19**
Financial and insurance activities	**203**	**103**	64	38	79	98	55	**1.63**	0.74	0.48	0.32	0.57	0.63	0.34
Real estate activities	6	22	14	62	22	42	52	0.05	0.16	0.11	0.52	0.16	0.27	0.32
Professional, scientific and technical activities	**382**	**361**	**417**	**474**	**455**	**460**	**532**	**3.07**	**2.59**	**3.13**	**3.97**	**3.26**	**2.95**	**3.26**
Administrative and support service activities	95	**160**	**249**	**143**	**150**	**363**	**280**	0.77	**1.15**	**1.88**	**1.20**	**1.08**	**2.33**	**1.71**
Education	**193**	**108**	**164**	**226**	**121**	**270**	**375**	**1.56**	0.78	**1.23**	**1.89**	0.87	**1.73**	**2.30**
Human health and social work activities	**418**	**307**	**238**	**447**	**382**	**314**	**350**	**3.37**	**2.20**	**1.79**	**3.74**	**2.73**	**2.09**	**2.15**
Arts, entertainment and recreation	85	68	7	27	33	21	22	0.68	0.49	0.05	0.22	0.24	0.13	0.13
Other service activities	**919**	**1141**	**541**	**412**	**469**	**1296**	**752**	**7.40**	**8.17**	**4.07**	**3.45**	**3.36**	**8.32**	**4.61**

Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a).

Table 7. The share of entities with foreign capital in service exports in Poland, 2009-2015 (%)

NACE sections	Number of exporting entities				Exports value			
	2009	2011	2013	2015	2009	2011	2013	2015
Non-service sections	32.8	32.8	31.2	31.7	70.3	64.3	62.6	66.7
Service sections	37.8	39.8	36.8	38.1	49.5	53.5	52.2	56.5
Service sections without section: Trade; repair of motor vehicles	42.7	45.8	43.0	43.9	55.0	59.4	59.1	61.7
Construction	25.2	30.3	25.1	26.2	21.4	31.7	37.2	40.8
Trade; repair of motor vehicles	33.8	34.8	31.7	32.9	44.4	47.7	46.3	51.2
Transportation and storage	32.3	34.8	29.9	29.9	49.3	54.1	51.1	56.0
Accommodation and Food Service Activities	52.0	50.0	50.0	42.9	30.4	32.0	36.4	20.5
Information and communication	60.0	59.3	56.7	60.2	83.4	77.9	73.2	67.5
Financial and insurance activities	86.5	68.8	69.6	64.5	94.8	79.9	71.1	59.5
Real estate activities	29.2	47.3	50.0	38.4	18.3	86.5	58.1	52.2
Professional, scientific and technical activities	52.9	52.4	53.1	55.3	67.6	68.3	69.9	75.0
Administrative and support service activities	57.9	61.5	54.3	56.3	49.8	69.0	76.2	63.7
Education	28.0	55.0	37.0	39.3	17.4	26.0	13.5	65.9
Human health and social work activities	20.0	34.5	40.0	27.5	13.7	39.9	60.4	35.3
Arts, entertainment and recreation	45.5	60.0	26.7	52.6	21.5	25.0	27.0	81.4
Other service activities	66.7	80.0	68.8	52.4	94.2	94.4	74.3	85.8

Source: own elaboration based on (GUS 2010a, 2011a, 2012a, 2013a, 2014a, 2015a, 2016a; GUS 2010b, 2011b, 2012b, 2013b, 2014b, 2015b, 2016b).

6. CONCLUSIONS

In the light of the presented studies, it can be stated that the entities with foreign capital play a very significant role on the development of the Polish services export and this role is increasing. In 2009-2015 the entities with foreign capital made up an important share of the enterprises carrying out export activity and generated more than a half of the income from the enterprises' total export of services.

Services play a relatively insignificant role in the international trade exchange of the enterprises with foreign capital active in Poland. It is beyond all doubt that the turnover of these enterprises, export in particular, still have a large potential of growth. This is evidenced by the continuing inflow of direct capital to the services sector in Poland, high dynamics of the trade exchange of the studies entities, which is higher than the dynamics of their turnover in commodity trade and also by the high competitiveness of export seen in many services sections of NACE, which is evidenced by the trade balance and the levels of TC and RCA ratios.

The presented results have a very general and preliminary character and should be treated as a starting point for further analyses. It is beyond all doubt that there is a need to carry out an in-depth research of the export of services stimulated by the FDI movement, and, in particular, this research should concentrate on the creation of specialisation and competitive advantage in the export of the services of a host country.

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International Trade in Services in the Years 2006-2015[1]

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Summary:

The paper presents a study of changes in the volumes of international trade in services in the world, especially in the European Union and in the Visegrad Group countries (V4). It also presents changes in the branch structure of international service exchange. The study includes the years 2006-2015, which enabled an analysis of the presented processes both before the global economic crisis and during the crisis. The growth of the value of exports and imports of services was observed, apart from the time of the greatest crisis (2009-2010) and the last year of the analysis, which may prove the beginnings of a new crisis in the world trade. In the V4 countries, Poland was the leader in trade in services in the years 2006-2015, except for communications, computer and IT services, where the Czech Republic dominated.

Keywords: international trade in services; international trade; branch structure of service exchange; V4 countries
JEL codes: B17, F14, F19

1. INTRODUCTION

When we compare the data from 1980 and 2015, the dynamics of the world exports and imports of services was greater than of the world exports and imports of goods: exports of goods – 807%, exports of services – 1220%, whereas imports of goods – 794%, imports of services – 1056% (World Trade Statistics Database, 2016). Thus, it seems justified to use the term "servitization" with regard to the processes undergoing in the internationalizing world economy, as the service sector is playing a bigger and bigger role in the development of

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economies (Kuźnar, 2007, p. 56; Wróbel, 2009, p. 81; Pera, 2012, p. 201; Zysk, 2013, p. 435; Zysk, 2015, p. 104). In the globalization era, the 21st century may be not only the century of services but also the century of services exchanged in the international scale. The aims of this paper are as follows: to present the volumes of international flows of services (both in exports and in imports) in the world, in the European Union and in the Visegrad Group countries, namely in Poland, the Czech Republic, Hungary and Slovakia. Moreover, changes in the branch structure of international service exchange will be analyzed (in the analogous geographical approach). The study will comprise the period from 2006 to 2015, which will enable to analyze the mentioned processes both before and during the global financial crisis (2008-2009).

2. INTERNATIONAL TRADE IN SERVICES IN THE WORLD

Changes in the contemporary world economy are closely connected with dynamically changing international trade in services. In the era of the internationalization and internalization of economic activities, the described phenomena are significantly influenced by technical progress, technological development and, owing to the development of modern forms of telecommunications, including the Internet, distance service provision. The aforementioned processes are reflected in changes in the volumes of trade in services. Table 1 presents the value of the world exports and imports in the years 2006-2015.

Table 1. Trade in services in the world, 2006-2015 (billions of USD, current prices*)

Year		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Direction of trade	Exports	2845	3421	3847	3488	3827	4427	4546	4824	5139	4826
	Imports	2665	3174	3635	3300	3613	4285	4437	4701	5044	4729

*The value of exports and imports in the global scale is not equal, among others, due to discrepancies in the application of W 120 classification introduced by GATS (General Agreement on Trade in Services)
Source: (World Trade Statistics Database, 2016).

As it can be seen in Table 1, from 2006 both the world exports and imports of services increased dynamically. A short-term drop was recorded only in 2009 (by about 10% in comparison with 2008 in the case of exports and by about 9% in the case of imports), when the global financial crisis caused by the excessive creation of money in bank systems was spreading. However, as early as in 2010, the level of exchange of services virtually returned to the value from before the crisis (over 3827 billion USD in exports and more than 3613 billion USD in imports), and already a year later a steady, systematic increase began, with peak values of both exports (4644 billion USD) and imports (4381 billion USD) in 2014. However, in the last year of the study, the value of both exports and imports of services decreased by around 6%. The lack of data for 2016 precludes an attempt to determine

the development of the situation, namely, whether this is a one-time decrease in the value of exchange or the beginning of another crisis.

3. THE VALUE OF TRADE IN SERVICES IN THE EUROPEAN UNION

Upon the study of changes in international trade in services globally, the study concerning the European Union will be presented. Table 2 presents the volumes of the EU exports and imports of services in the discussed years.

Table 2. Volume of trade in services in the European Union, 2006-2015 (billions of USD, current prices)

Year		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Direction of trade	Exports	1340	1622	1797	1625	1693	1946	1937	2095	2235	2017
	Imports	1184	1413	1589	1438	1467	1660	1648	1776	1901	1736

Source: as in Table 1.

In the EU trade in services – analogously to global exchange – from 2006 to 2008, both exports and imports were systematically going up. In 2009, a decline was recorded in the trade in both directions of exchange (by about 10%, both in exports and in imports). Yet, only in 2011, one year later than in the case of the world service exchange, the level exceeded the values from before the global financial crisis (1910 billion USD in exports and 1621 billion USD in imports). In the following year there was, however, another decrease in trade in services in both directions, and only in 2013 the level of exchange exceeded the values from 2011 (1988 billion USD in exports, 1663 billion USD in imports). In 2014, the values of trade – in both directions – increased again, yet in the last year of the analysis, analogously as in the case of trade in services in the world, the turnovers fell considerably, by about 10%.

4. THE VOLUME OF TRADE IN SERVICES IN THE VISEGRAD GROUP COUNTRIES (V4)

After the analyses of trade in services in the world and in the European Union, the study of the four Visegrad countries will be presented. Table 3 shows the values of exports of services in the years 2006-2015.

Table 3. Volume of exports of services in the Visegrad Group countries (V4), 2006-2015 (billions of USD, current prices)

Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Poland	20	28	35	28	32	41	41	44	48	43	360
Czech Republic	15	19	23	20	21	24	24	24	25	22	217
Slovakia	7	9	9	6	6	7	8	9	9	8	78
Hungary	13	17	20	18	19	24	20	22	24	21	198

Source: as in Table 1.

It is worth noting that in the years 2006-2015 in total Poland had the largest value of exports of services among the studied group of countries (about 360 billion USD). The Czech Republic took the second position (about 217 billion USD), Hungary was the third (about 198 billion USD), and Slovakia recorded the lowest value of exports of services in the analyzed years – about 78 billion USD. It is almost five times less than in the case of Poland, nearly three times less when compared with the Czech Republic and Hungary. From 2006 to 2008, exports of services in the studied countries recorded a rising trend. In 2009, the level of sales of services went down (in Poland exports by almost 20%, in the Czech Republic by around 15%, in Slovakia by as much as 30%, and in Hungary by about 10%). The decreases were much higher than in the case of the global and EU sales of services. In the years 2010-2014, exports of services were systematically growing, except for Hungary where the value of exports in the years 2012-2013 was declining in comparison with 2011. In 2015, all the countries recorded a fall (by about 10% on average) in foreign sales of services – analogously as in the case of trade in services in the European Union and worldwide.

Another analysis concerned foreign imports of services in the Visegrad Group countries.

Table 4. Value of imports of services in the Visegrad Group countries, 2006-2015 (billions of USD, current prices)

Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Poland	19	24	30	24	30	34	34	34	37	33	297
Czech Republic	12	14	18	16	17	20	20	20	22	19	178
Slovakia	6	8	10	8	7	8	7	9	9	8	80
Hungary	12	16	18	17	16	19	16	17	18	16	165

Source: as in Table 1.

As it can be observed, in the years 2006-2015 in total, Poland – analogously as in the case of exports – had the largest value of imports of services among the studied group of countries (about 297 billion USD). The second position was taken by the Czech Republic (about 178 billion USD), Hungary was the third (about 165 billion USD), and Slovakia recorded the lowest value of imports of services in the analyzed years – about 80 billion USD. As the only member of the Visegrad Group, the country recorded a greater value of imports than of exports of services in the studied period (80 billion USD and 78 billion USD, respectively). From 2006 to 2008, exports of services in the studied countries recorded a rising trend. In the initial phase of the economic crisis (2009), the level of imports of services went down (in Poland by about 20%, in the Czech Republic by about 12%, in Slovakia by about 20%, and the least in Hungary, by about 5%). In the case of the three described countries the decreases were much higher than in the case of the global and EU purchases of services. In the years 2011-2014, imports of services in Poland, the Czech Republic and in Hungary were virtually at the same level, only in Slovakia from 2012 it increased by several percentage points a year. In 2015, all the countries recorded a fall (by about 10% on average) in foreign purchases of

services – analogously as in the case of trade in the EU and the world services and in the case of exports of the V4 Group countries.

5. CHANGES IN THE BRANCH STRUCTURE OF INTERNATIONAL EXCHANGE OF SERVICES

In accordance with the WHO (World Trade Organization) classification, we can distinguish three basic categories of services: transport, tourism and so-called other services. Transport services are those for international trade of goods and for the movement of people by various means of transport (car, rail, air transport, as well as maritime shipping and inland waterway transport). Tourism services are socially useful activities aiming at the fulfillment of tangible and intangible needs of an individual within the scope of tourism. Other services are telecommunications, construction, financial, insurance, computer and IT industry services, licensing fees and other fees, as well as so-called other business services (advertising, market research, consultancy, advising, conference and others), personal, cultural and recreational. This part of the paper presents changes in the branch structure of international trade in services (in two directions of exchange) in the analogous geographical approach, namely in the world, in the European Union and in the Visegrad Group (V4) countries.

6. CHANGES IN THE BRANCH STRUCTURE OF INTERNATIONAL EXCHANGE OF SERVICES – THE GLOBAL APPROACH

The study of changes in the international branch structure in the global approach will be conducted in two directions of trade, namely in exports and imports, in the years 2006-2015. Table 5 presents the subjective branch structure of foreign sales of services in the world.

Table 5. Branch structure of exports of services in the world, 2006-2015 (billions of USD)

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Market services	2845	3421	3847	3488	3827	4349	4467	4747	5063	4754
- transport	635	766	890	692	807	902	916	942	973	876
- tourism	761	875	963	876	951	1073	1113	1196	1294	1230
- other services	1445	1775	1990	1915	2061	2218	2283	2444	2628	2495

Source: as in Table 1.

As we can observe in Table 5, in the studied period exports of other services prevailed, and tourism and transport services followed. In 2009, a decrease in exports in each category of services can be seen. Exports of tourism services (951 billion USD in 2010) and exports of other services (2061 billion USD in 2010) returned fastest to the level from before the financial crisis. On the other hand, exports of transport services, obviously related to trade in goods, only in 2013 (905 billion USD) exceeded the level from 2008 (890 billion USD). In 2014, in each of the analyzed categories there was an increase in the foreign sales of services in comparison with 2013, however, as early as in the subsequent year we can observe a fall of exports in

the four studied areas: in all market services by about 6%, in transport services by as much as 10%, in tourism and other services by 5%. The next analyzed direction of the exchange of services will be imports – Table 6 presents the branch structure of the purchases of services in the world in the years 2006-2015.

Table 6. Branch structure of imports of services in the world, 2006-2015 (billions of USD)

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Market services	2665	3174	3635	3300	3613	4162	4318	4581	4913	4611
- transport	758	900	1052	828	973	1112	1151	1179	1208	1089
- tourism	694	802	869	793	857	956	1013	1090	1242	1216
- other services	1209	1447	1675	1634	1731	2005	2062	2204	2358	2207

Source: as in Table 1.

As we can see in Table 6, imports which prevailed in the studied period, analogously as in the case of exports, were imports of other services, followed by tourism and transport services. In 2009, we could see a decrease in imports in each category of services. Imports of services in the category of other services returned fastest to the level from before the financial crisis (1731 billion USD in 2010). Imports of tourism and transport services returned to the value from before 2008 only after three years (947 billion USD and 1110 billion USD in 2011). In 2014, in each of the analyzed categories there was an increase in foreign purchases of services in comparison with 2013, however, already in the following year we can observe a decrease in imports in the four studied areas: in all market services by about 6% (the same as in exports), in transport services by as much as 10% (also the same as in foreign sales), in tourism services by only about 2%, and in other services by about 7%.

7. CHANGES IN THE BRANCH STRUCTURE OF INTERNATIONAL EXCHANGE OF SERVICES IN THE EUROPEAN UNION

As in Part 6 (the global approach), an analysis of changes in the branch structure of international exchange of services in the EU covered two directions: exports and imports in the years 2006-2015. Table 7 presents data with regard to foreign sales of services in the European Union within the studied scope.

Table 7. Branch structure of exports of services in the European Union, 2006-2015 (billions of USD)

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Market services	1329	1609	1782	1613	1681	1924	1915	2074	2216	1998
- transport	293	354	409	321	353	393	382	403	417	365
- tourism	319	364	388	337	334	389	377	408	424	367
- other services	716	887	981	953	991	1069	1083	1181	1291	1198

Source: as in Table 1.

As it can be seen in Table 7, exports of other services prevailed in the studied period, followed by tourism and transport services. In 2009, we can see a decline in

exports in each category of services – as in the global approach. Exports of other services returned fastest to the level from before the financial crisis (991 billion USD in 2010). On the other hand, exports of tourism services only in 2013 (393 billion USD) exceeded the level from 2008 (388 billion USD). The level of exports of transport services only in 2014 (417 billion USD) returned to the level from 2008 (409 billion USD). In the same year, we can observe the growth of foreign sales of other services (1291 billion USD) and tourism services (424 billion USD) as compared with 2013. However, in the last year of the analysis in all the studied categories we can note a decline in exports: the most rapid one concerned tourism services (almost 15%) and transport services (12%), with regard to other services it was about 8%. The next analyzed direction of exchange of services will be imports – Table 8 presents the branch structure of purchases of services in the European Union in the years 2006-2015.

Table 8. Branch structure of imports of services in the European Union, 2006-2015 (billions of USD)

Category	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Market services	1175	1410	1585	1434	1463	1635	1624	1752	1877	1716
- transport	277	325	366	287	317	347	334	354	367	327
- tourism	310	357	385	334	327	358	343	364	386	336
- other services	585	704	795	774	781	896	909	979	1071	1005

Source: as in Table 1.

As we can see in Table 8, imports of other services prevailed in the studied period, followed by tourism services and transport services (the same as in the case of exports). In the year 2009, a fall in imports in each category can be seen. Imports of services belonging to the category of other services returned fastest to the level from before the financial crisis, but only after two years (869 billion USD in 2011). Imports of tourism and transport services only in 2014 (386 and 367 billion USD, respectively) returned to the value from before 2008 (385 and 366 billion USD). On the other hand, in 2015 (analogously as in exports), we can note a decrease in imports in each studied category: the largest one concerned tourism services (about 13%) and transport services (11%), and in the case of other services it was about 6%.

8. CHANGES IN THE BRANCH STRUCTURE OF EXCHANGE OF SERVICES IN THE VISEGRAD GROUP COUNTRIES (V4)

Following the analysis of the subjective issue performed in the approach and in the European Union global, a study was conducted in the Visegrad Group countries in the division into two directions of exchange in the analogous time period. The V4 countries compete on the international arena (Dorożyński, Kuna-Marszałek, 2016, p. 120; Melikhova et al., 2015, p. 12), therefore, an additional element which was examined (in addition to transport, tourism and other services) were additionally selected four categories of services: construction services, financial services, telecommunications with computers and IT, as well as so-called other business services including advertising, consulting and conference services, market research and counseling.

It will enable a more detailed comparison of the described countries and indicating their position in relation to each other in international service exchange. The way of presenting data will be a little different than in the global approach and the EU approach, since the individual type of service in the four countries and in both directions of exchange will be separately analyzed. Table 4 presents exports and imports of transport services in the years 2006-2015 in the Visegrad Group countries.

Table 9. Exports and imports of transport services in the V4 countries, 2006-2015 (billions of USD)

Category	Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports – transport services	Poland	6	9	10	8	8	11	11	12	13	11	99
	Czech Republic	3	4	5	5	5	6	6	5	5	5	49
	Slovakia	no data	no data	3	2	2	2	2	3	3	2	19
	Hungary	3	3	4	4	4	5	5	5	6	5	44
Imports – transport services	Poland	4	5	7	5	6	7	7	7	7	7	62
	Czech Republic	3	3	4	3	4	5	5	5	5	5	42
	Slovakia	no data	no data	3	2	2	2	2	2	2	2	17
	Hungary	3	3	4	3	3	4	4	4	4	4	36

Source: as in Table 1.

As we can see in the table above, Poland was an obvious leader in the sales of transport services, with the value of exports in the studied period at the level of 99 billion USD. It was two times more than in the Czech Republic (49 billion USD) and in Hungary (44 billion USD), and over five times more than in Slovakia (19 billion USD). Poland was also a leader in imports (62 billion USD), Hungary and the Czech Republic bought the studied services abroad at the level about half as large (42 and 36 billion USD), and Slovakia – three times smaller (17 billion USD). Interestingly, we can notice that the financial crisis did not affect a rapid decrease in exports or imports of transport services in the V4 countries.

The next analysis concerned tourism services. Table 10 presents exports and imports of tourism services in the years 2006-2015 in the Visegrad Group countries.

Table 10. Exports and imports of tourism services in V4 countries, 2006-2015 (billions of USD)

Category	Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports – tourism services	Poland	7	10	11	8	9	10	11	11	11	9	97
	Czech Republic	6	7	8	7	7	8	7	7	7	6	70
	Slovakia	no data	no data	2	2	2	2	2	2	2	2	16
	Hungary	4	5	6	6	6	6	5	5	6	5	54
Imports – tourism services	Poland	7	7	9	7	8	8	8	9	9	8	80
	Czech Republic	3	3	5	4	4	5	4	5	5	5	43
	Slovakia	no data	no data	2	2	2	2	2	2	2	2	16
	Hungary	3	3	4	3	3	4	4	4	4	4	36

Source: as in Table 1.

As we can see in the table above, Poland was a leader in the sales of foreign tourism services again, with the value of exports in the studied period at the level of 97 billion USD. It was by about 40% more than in the Czech Republic

(70 billion USD), almost 50% more than in Hungary (54 billion USD), and about six times more than in Slovakia (16 billion USD). Poland was also a leader in imports (80 billion USD), Hungary and the Czech Republic bought the studied services abroad at the level of about half lower (43 and 36 billion USD), and Slovakia – almost four times lower (16 billion USD). Also in the case of tourism services, the financial crisis did not affect a slump in exports or imports of tourism services in the V4 countries.

Another analysis concerned services belonging to the category of so-called other services. Table 11 presents exports and imports of services of this group in the years 2006-2015 in the Visegrad Group countries.

Table 11. Exports and imports of services in the "other services" category in V4 countries, 2006-2015 (billions of USD)

Category	Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports – other services	Poland	6	8	12	11	14	16	16	16	18	17	134
	Czech Republic	5	6	8	7	8	9	9	10	10	9	81
	Slovakia	no data	no data	3	2	2	2	3	3	3	3	21
	Hungary	5	7	8	8	9	10	9	9	10	9	84
Imports – other services	Poland	7	10	12	11	14	18	17	17	18	16	140
	Czech Republic	6	7	8	8	8	10	10	10	11	9	87
	Slovakia	no data	no data	5	4	3	3	3	4	4	4	30
	Hungary	7	9	11	11	10	12	10	11	11	10	102

Source: as in Table 1.

What can be seen in the table above is that Poland was a leader in the foreign sales of other services, with the value of exports in the studied period of 134 billion USD. It was about 65% higher than in Hungary (84 billion USD), and the Czech Republic (81 billion USD), and about six times higher than in Slovakia (21 billion USD). Poland was also a leader in imports (140 billion USD), Hungary bought the studied services abroad at the level of 102 billion USD, The Czech Republic – 87 billion USD, and Slovakia – 30 billion USD). It should be noted that all countries of the Visegrad Group in the years 2006-2015 were net importers in this category of services. The financial crisis did not affect a slump in exports or imports of the studied category of services.

The next analysis concerns one of the types of services included in the category of so-called other services – construction services. This is an important type of services, as it is significant for the development of prosperity in many other sectors of a national economy, influences the labor market and generates the growth of GDP. Table 12 presents exports and imports of services of this group in the years 2006-2015 in the Visegrad Group countries.

As it can be seen in the table above, Poland was a leader in the foreign sales of construction services, with the value of exports in the studied period at the level of 15.4 billion USD. It was over two times more than in the Czech Republic (6.2 billion USD), almost four times more than in Hungary (4.2 billion USD), and nine times more than in Slovakia (1.7 billion USD). Poland was also a leader in imports (8.2 billion USD),

the Czech Republic bought the studied services abroad for about 4.1 billion USD, Slovakia – 2.9 billion USD, and Hungary – 2.8 billion USD. It is worth noting that in the years 2006-2015 Slovakia was a net importer of this category of services. The effects of the financial crisis were visible in the case of Polish exports of services whose level even in 2015 (1.5 billion USD) did not return to the value from 2008 (1.9 billion USD). A similar situation took place in Hungary (0.3 billion USD to 0.6 billion USD, respectively). In Slovakia, the values of foreign sales of construction services fluctuated from 0.3 billion USD to 0.1 billion USD, whereas in the Czech Republic the level of exports initially went up (1 billion USD in 2010 – doubling of the value from 2008 – 0.5 billion USD), and then it dropped to 0.6 billion USD in 2013, and next increased again to 0.8 billion USD. In imports in each V4 country, decreases in the level of purchases of construction services were recorded, the biggest ones were noted in the case of Hungary (from 0.4 billion USD in 2008 to 0.2 billion USD in 2015).

Table 12. Exports and imports of construction services in the V4 countries, 2006-2015 (billions of USD)

Category	Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports – construction services	**Poland**	1.2	1.6	1.9	1.5	1.3	1.6	1.6	1.5	1.7	1.5	15.4
	Czech Republic	0.2	0.3	0.5	0.5	1.0	0.8	0.8	0.6	0.7	0.8	6.2
	Slovakia	no data	no data	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.2	1.7
	Hungary	0.4	0.5	0.6	0.5	0.4	0.5	0.4	0.4	0.3	0.3	4.2
Imports – construction services	**Poland**	0.5	0.7	0.9	1.3	1.0	0.7	0.7	0.8	0.8	0.8	8.2
	Czech Republic	0.2	0.2	0.4	0.3	0.6	0.5	0.6	0.5	0.5	0.4	4.1
	Slovakia	no data	no data	0.5	0.4	0.5	0.5	0.4	0.2	0.2	0.2	2.9
	Hungary	0.2	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	2.8

Source: as in Table 1.

The next analysis concerns another type of services included in the category of so-called other services – financial services. Table 13 presents exports and imports of services of this group in the years 2006-2015 in the Visegrad Group countries.

Table 13. Exports and imports of financial services in the V4 countries 2006-2015 (billions of USD)

Category	Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports – financial services	**Poland**	0.2	0.4	0.6	0.4	0.6	0.5	0.5	0.5	0.8	0.7	5.0
	Czech Republic	0.4	0.3	0.4	0.3	0.4	0.5	0.4	0.5	0.5	0.4	4.0
	Slovakia	no data	no data	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.2	1.2
	Hungary	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	2.4
Imports – financial services	**Poland**	0.4	0.5	0.8	0.9	0.9	0.7	0.7	0.7	1.2	1.0	7.8
	Czech Republic	1.1	0.7	1.0	0.6	0.5	0.5	0.4	0.6	1.0	0.4	6.8
	Slovakia	no data	no data	1.0	0.5	0.4	0.3	0.3	0.2	0.2	0.2	3.0
	Hungary	0.2	0.3	0.4	0.3	0.3	0.4	0.2	0.2	0.3	0.3	2.8

Source: as in Table 1.

As we can see in the table above, Poland was a leader in the foreign sales of financial services again, with the value of exports in the studied period at the level of 5 billion USD. It was by 1 billion USD more than in the Czech Republic (4 billion

USD), over two time more than in Hungary (2.4 billion USD) and four times more than in Slovakia (1.2 billion USD). Poland was also a leader in imports (7.8 billion USD), the Czech Republic bought the studied services abroad at the level of 6.8 billion USD, Slovakia – 3 billion USD, and Hungary – 2.8 billion USD. It is worth noting that in the years 2006-2015 all the V4 countries were net importers of this category of services in spite of significant presence of BPO (Business Process Outsourcing) centers which often operate exactly in the financial industry (Sass, Fifekova, 2011, p. 1594). The consequence of the financial crisis were visible in the case of Polish exports of services, the level of which in the year 2009 (0.4 billion USD) decreased in comparison with 2008 (0.6 billion USD). A similar situation took place in the Czech Republic (0.3 billion USD to 0.4 billion USD, respectively), in Slovakia (0.1 billion USD to 0.3 billion USD, respectively) and in Hungary (0.3 billion USD to 0.4 billion USD). In 2015, Polish exports of this type of services exceeded the 2008 level and reached 0.7 billion USD, and the Czech one returned to the state from 2008 and reached 0.4 billion USD. On the other hand, Slovakian and Hungarian exports in 2015 did not return to the level from before the financial crisis. In imports in each V4 country decreases in the level of purchases of financial services in the years 2009-2013 were recorded, the biggest ones can be seen in the case of Slovakia (from 1 billion USD in 2008 to 0.2 billion USD in 2013). In 2014, imports of the analyzed category of services were rising, but in the last year of the analysis in Poland and the Czech Republic they fell again (they did not change in the other two countries).

Another analysis concerned the next type of services included in the category of so-called other services – telecommunications, computer and IT services. Table 14 presents exports and imports of this group in the years 2006-2015 in the Visegrad Group countries.

Table 14. Exports and imports of telecommunications, computer and IT services in the V4 countries, 2006-2015 (billions of USD)

Category	Country/ Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports telecommunications, computer and IT services	**Poland**	0.4	0.7	0.9	0.9	1.5	2.1	2.4	2.9	4.2	4.3	20.4
	Czech Republic	1.3	1.5	2.0	1.9	1.7	2.3	2.5	2.7	2.9	2.6	21.5
	Slovakia	no data	no data	0.5	0.4	0.5	0.6	0.7	1.0	1.0	0.9	5.5
	Hungary	0.8	1.2	1.7	1.7	1.7	1.8	1.6	1.8	2.0	1.8	16.3
Imports – telecommunications, computer and IT services	**Poland**	0.5	0.8	0.9	0.8	1.5	1.8	1.8	2.1	3.0	2.7	15.8
	Czech Republic	0.9	1.3	1.5	1.6	1.8	1.9	1.9	2.1	2.0	1.6	16.6
	Slovakia	no data	no data	0.5	0.5	0.4	0.4	0.4	0.8	0.8	0.7	4.5
	Hungary	1.0	1.2	1.4	1.5	1.3	1.5	1.2	1.5	1.6	1.4	13.4

Source: as in Table 1.

For the first time the Czech Republic was a leader in the foreign sales of the studied services with the value of exports at the level of 21.5 billion USD. It was by about 1 billion USD more than in Poland (20.4 billion USD), over 30% more than in Hungary (16.3 billion USD) and almost four times more than in Slovakia

(5.5 billion USD). The Czech Republic was also a leader in imports (16.6 billion USD), Polish imports were a little lower – 15.8 billion USD, Hungary bought the studied services abroad for about 13.4 billion USD, Slovakia – 4.5 billion USD. It is worth noting that all the V4 countries were net exporters of this category of services. Interestingly, one cannot see the effects of the financial crisis in exports of the analyzed category of services, and in imports insignificant decreases were recorded in Slovakia and Hungary and only in the years 2010-2012. The last analysis concerns so-called other business services – also included in the category of other services. Table 15 presents exports and imports of services belonging to this group in the years 2006-2015 in the Visegrad Group countries.

Table 15. Exports and imports of other business services in the V4 countries, 2006-2015 (billions of USD)

Category	Country/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Exports – other business services	**Poland**	3.7	5.4	8.0	7.3	9.7	10.0	9.9	10.0	10.7	10.0	84.6
	Czech Republic	2.6	3.7	4.6	4.0	4.2	5.2	5.0	5.3	5.1	4.6	44.3
	Slovakia	no data	no data	1.4	0.8	0.8	1.0	1.5	1.9	1.8	1.5	10.8
	Hungary	2.1	3.0	3.6	3.4	3.9	5.2	4.3	4.4	4.9	4.5	39.3
Imports – other business services	**Poland**	3.8	4.9	6.4	5.3	7.4	8.2	7.8	8.3	8.8	7.9	68.8
	Czech Republic	3.3	3.9	4.0	3.9	3.9	5.1	5.5	5.1	5.5	4.7	44.8
	Slovakia	no data	no data	1.8	1.5	1.1	3.0	2.8	3.8	3.9	3.5	21.4
	Hungary	3.6	4.7	5.7	5.4	5.5	6.8	5.6	6.4	6.4	5.2	55.4

Source: as in Table 1.

As it can be sees in the table above, Poland was an unquestionable leader in the foreign sales of other business services, with the value of exports in the studied period at a high level of 84.6 billion USD. It was nearly two times more than in the Czech Republic (44.3 billion USD), over two times more than in Hungary (39.3 billion USD), and almost eight times more than in Slovakia (10.8 billion USD). Poland was also a leader in imports (68.8 billion USD), Hungary purchased the studied services abroad at the level of 55.4 billion USD, the Czech Republic for 44.8 billion USD, and Slovakia – 21.4 billion USD. It is worth noting that in the years 2006-2015 only Poland was a net exporter of this category of services. The effects of the financial crisis were not visible in the case of exports or imports of this category of services.

9. CONCLUSIONS

To sum up the above study conducted for the years 2006-2015 we can claim that:

a) in the case of international trade in services (in both directions of exchange) in the global scale, in the European Union and in the four countries of the Visegrad Group, an increase in turnovers to the year 2014 was noted – with the exception of the years of the financial crisis (2009-2010); however, in 2015 the values of both exports and imports in each analyzed case declined; it

is difficult to find the reason for this type of situation, yet this phenomenon may mark the beginning of another wave of crisis,

b) as for the branch structure of service exchange in the global scale, in the European Union and in the four Visegrad Group countries – the growth of both exports and imports of transport, tourism and other services was recorded in the years 2006-2008; in the years of the financial crisis, turnovers decreased in each category, except for transport and tourism, as well as exports of telecommunications, computer and IT services and other business services, but from 2011 they started to rise again until 2014; in the last year of the analysis both exports and imports dropped – which may prove the beginning of another wave of crisis,

c) when analyzing service exchange of the Visegrad Group countries, we can note a definite dominance of Poland with regard to the value of exports and imports; the Czech Republic, Hungary and Slovakia followed; when studying the branch structure of trade in services, we can notice that Poland dominates in trade in transport, tourism services, in the category of other services, construction and financial services; only in the case of exports and imports of telecommunications, computer and IT services, the Czech Republic outstripped Poland in the studied period.

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10

The Potential Impact of Brexit on Trade between the European Union and the United Kingdom with Implication for Poland and other CEECs[1]

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Summary:

The crisis of the European Union (EU), the economic problems of Great Britain (GB) and the launch of the country's exit procedure from the integration grouping, in result of a referendum held in June 2016, sparked discussions on the impact of Brexit on various spheres of economic, social and political relations. The aim of the chapter is to try to determine the impact of the GB leaving the EU on trade of the grouping, with particular focus on Poland and Central and Eastern European countries (CEECs) and the potential effects of a change in the scope of regulation of EU-GB trade relations. The chapter reviews research of the phenomenon of Brexit and its impact on the EU and GB. One has also presented the alternative solutions to regulate the relations between these entities after GB exit from the EU. An attempt was also made to identify the potential effects of leaving the European Union by the United Kingdom, primarily from the point of view of CEECs trade. The problems discussed in the chapter required a literature review of the subject and subjecting the collected material to the analysis. In the last part of the chapter, the collected statistical material was analysed using the basic statistical indicators, including the distance measure, allowing to compare the data obtained from EUROSTAT and ITC Trade Map.

Keywords: Brexit; trade; the European Union; CEECs; the United Kingdom; Great Britain; regulations of the trade; trade analysis
JEL codes: F14, F15, C10, F53

1. INTRODUCTION

Great Britain is an important member of the European Union (EU), but it has had a special status since the creation of the Economic and Monetary Union (EMU). Since the very beginning of its membership in the European Union, the country has

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opposed efforts to develop transnational integration. The global economic crisis, which has contributed to the disclosure of numerous problems in the European Union, particularly in the euro area, but also to the migration crisis and economic problems in Great Britain (GB) with low economic growth, triggered a wave of social discontent in the country and in June 2016, British society voted in favour of leaving the European Union. In March 2017, 9 months after the referendum, the European Council was informed of the intention to withdraw from the EU and formally began the procedure for the country's withdrawal from the grouping for the first time, based on art. 50 of the Lisbon Treaty. This means that GB should leave the EU until March 29, 2019, but the European Council may, in agreement with the state, make a unanimous decision to extend that period. By the end of this two-year period, an agreement should also be negotiated, setting out not only the terms of withdrawal, but also frameworks for future relations with the European Union.

The purpose of the chapter is to try to determine the conditions for further EU and GB cooperation and the potential effects on the trade of goods after the country has left the grouping. The analysis focused primarily on Poland and selected CEE countries belonging to the integration grouping.

2. BREXIT AND ITS POTENTIAL EFFECTS – RESEARCH REVIEW

Brexit and its implications for the EU and GB, as a relatively new phenomenon[2], are quite often the subject of research by many researchers of the European Union and the United Kingdom (UK). The anticipated effects of Brexit for the GB economy in the short and long term were compared to the alternative of staying in the EU as well as leaving the integration grouping by this country (Kierzenkowski, Pain, Rusticelli, Zwart, 2016). Wielechowski and Czech (2016) point to the most important arguments in favour of and against Britain's withdrawal from the EU, taking into account their economic and political dimensions. This latter approach is based on the concept of a new political economy. They also analyse the economic and financial impact of Brexit and the EU leaving scenario. Piris (2016), similarly to Pawlas (2017) and Pera (2017), carried out an analysis of possible arrangements for regulating relations between the EU and GB after the country left the integration grouping.

Research on the impact of Brexit on the GB economy were also conducted by the Center for Economic Performance and included, among others, the effects on trade (Dhingra, Ottaviano, Sampson & Reenen, 2016), the flow of foreign direct investment (Dhingra, Ottaviano, Sampson & Reenen, 2016) or immigration (Dhingra, Ottaviano, Sampson & Wadsworth, 2016).

Basing their research on the computable general equilibrium model, Boulanger and Philippidis (2015) conducted an analysis of the effects of creating a free trade area between the UK and the EU, in the context of Brexit's impact on the EU budget and the macroeconomic situation of the 15 member states, while the other

[2] In the 80's XX century only Greenland, as autonomous area of Denmark, left the contemporary European Economic Community.

countries were treated as one group. The article did not examine changes in the structure of the GB import tariff, although sensitivity analysis was carried out with regard to the increase in trade costs (Boulanger & Philippidis, 2015).

Nicolaides & Roy (2017) point out in their studies the significant decrease in the attractiveness of the GB market after leaving the EU as a partner negotiating new bilateral trade agreements and pursuing their own trade policies. Recent research conducted by the British National Institute for Economic and Social Research, comparing the conditions of access to the single market with the provisions of the FTA, shows that GB can lose as much as 45% of the volume of trade in goods and up to 60% of the volume of trade in EU services. Non-tariff barriers, often of a regulatory nature, that are banned in the common market, may, however, occur in trade with non-EU countries (Nicolaides & Roy 2017).

Research on Brexit also refer to GB's future relationships with other countries, particularly in relation to countries that are important partners. The issues of Brexit's influence on further relations between China and Great Britain, as well as between China and the European Union and China's foreign policy regarding the EU's economic policy objectives were presented by Yu (2017). The subject of the research is also the importance of Brexit for future US relations with the EU and the US with Great Britain (Oliver & Williams, 2016).

Agricultural policy and its effects are also quite often the subject of research in the context of Brexit. Swinbank (2016) carried out an analysis of the assumptions and possible alternatives for GB agricultural policy and the EU Common Agricultural Policy. Matthews (2016) also carried out studies on the impact of Brexit on future EU agricultural and food policies, and in particular on the future Common Agricultural Policy (CAP), including the impact on the EU budget, as well as regulations in the scope of CAP environment, regulations of the EU agri-food business, indications for trade and trade relations (Matthews, 2016). Brexit and the level of direct charges to British farmers, in the context of changes in the EU-GB regulatory regime (under the conditions of the free trade area or basing the trade on the most-favoured-nation clause) were investigated by Jongeneel, Van Berkun & Vrolijk (2016).

Among the conducted research, Brexit's impact assessments for EU countries are relatively rare. Exception may be constituted by research on the impact of Brexit on the economy of Ireland. The potential effects of Brexit on the Irish economy, showing the trade in goods and services, the flow of capital in the form of foreign direct investment, the impact on the energy sector and migration were carried out by Barrett, Bergin, FitzGerald, Lambert, McCoy, Morgenroth, Siedschlag & Studnicka (2015). Matthews (2015), on the other hand, shows the influence of Brexit on trade in agri-food products between Great Britain and Ireland. The problems that can affect Ireland as a result of GB's exit from the EU are also being investigated by Bruton (2017).

Leaving the European Union by a Member State, for the first time in the history of the integration grouping, and its effects have been a subject of research for three years. The results, although different, show the negative impact of this decision on the GB economy, especially in the short term. The analyses carried out not only concern the effects of Brexit, but they also focus on the procedure of leaving

the European Union and the course of negotiating future EU relations with the GB, as well as analysing selected sectors of the economy. In view of the change in GB and EU relations, the next section attempts to quantify the potential effects on GB trade with selected Central and Eastern European countries.

3. BREXIT AND POTENTIAL CONDITIONS OF TRADE RELATIONS BETWEEN THE EUROPEAN UNION AND GREAT BRITAIN

Integration in the political, economic and social dimensions is a process that has developed dynamically for more than 50 years on the European continent. However, since 2009, processes have been slowing down and hampering the deepening of economic integration between countries and its further enlargement, triggered by the internal crisis of EU integration and the structural of euro area, which, alongside the democratic deficit, have revealed the weakness of the EU security system, including migration policy. This crisis has also triggered disintegration tendencies in the EU itself, the most severe of which is leaving the grouping by the GB. In spite of the agreement reached in February 2016, the country has given the opportunity to fully enjoy the freedoms of the single market and to guarantee the absence of an obligation to join the euro area (European Council Meeting, 2016), and to permanently exclude it from participation in the process of deepening integration and allowing for the restriction of immigrants from other EU countries in the scope of access to social welfare, including benefits (Prostak, 2014). Four months after it the British society voted in favour of the UK exit from the EU (Pawlas, 2017, Pera 2017). On March 29, 2017, after 9 months after the referendum on Brexit, the European Council was informed of this intention and formally began the procedure of the country's exit from the integration grouping, based on art. 50 of the Lisbon Treaty (Consolidated version of the Treaty on European Union…, 2012). This means that the UK should leave the EU until March 29, 2019, but the European Council may, in agreement with the state, make a unanimous decision to extend that period. An agreement should now be negotiated not only in scope of the terms but also for the framework for future EU relations. This agreement is negotiated on the basis of art. 218 of the Treaty on the Functioning of the EU (Consolidated version of the Treaty on European Union…, 2012). The Council shall take a decision on this matter by qualified majority after obtaining the consent of the European Parliament. From the date of entry into force of the agreement, the country leaving the EU ceases to be bound by the Treaties. The EU and GB negotiations began on June 19, 2017. Both parties accepted the terms of art. 50 of the Lisbon Treaty, setting out the structure of the negotiations, dates and priorities for further negotiation rounds, which were hitherto planned until October.

The diagram below shows previous GB's access to the EU market as well as the possibility of regulating relations between the EU after Brexit. Total blackout areas mean fully granted preferences, while others represent appropriately limited restrictions on access to the EU market (darkened in half) or lack of such preferences in the sample agreement.

Model of preferences and access to EU market		Type of arrangement				World Trade Organization (MFA)		
		Membership of the EU	European Economic Area	Customs Union	Free trade agreement			
		The United Kingdom	Norway	Turkey	Switzerland	Singapore*	Canada*	WTO members
Access to Single Market	Goods	■						
	Services	■	■		■	■	■	
	People	■	■		■			
	Capital	■	■		■	■	■	
Requirements	Financial contribution	■	■		■			
	EU rules and legal system	■	■		■			
Influence over EU rules and regulation		■						
Influence on relations with non EU markets		■						

* – Agreements with Singapore and Canada have not yet entered into force.

Figure 1. Models for regulating GB relations with the European Union after Brexit
Source: (Munro & White, 2017; Karagol, 2008).

As can be seen from the above scheme, only full GB membership in the EU guarantees freedom of flow of goods and services. Adoption of any other option from among the possible solutions will result in a limited access in flow of goods, mainly for agricultural and fishery products (i.e. Norway). Switzerland has duty-free access to the EU market for all non-agricultural goods. Turkey, which creates a customs union with the EU because it only covers industrial goods and processed agricultural products, also has restricted access. From the UK standpoint, the agreement on the customs union may not be very favourable to this country (Lea 2016). The EU-Canada Free Trade Agreement provides for the abolition of duties for 98% of EU goods exported to that country. Restrictions on import quotas will be maintained only for exports of certain agricultural goods from Canada to the EU. In addition, it should be borne in mind that the customs clearance at EU borders is maintained in all proposed solutions (Springford, Tulford, & Whyte, 2014).

For GB, services are a very important part of the future EU agreement (Springford, Tilford, McCann, Whyte & Odendahl 2016). Bearing in mind the access to the EU services market, almost none of the agreements mentioned so far do not guarantee the extent of liberalization that GB has as a member of the EU. So far, the widest range of preferences for free movement of services is only in EFTA countries, with the exception of Switzerland. From the point of view of the freedom of movement of services, including mainly financial ones, this is a solution for GB, but the most expensive, including the maintenance of free movement of people, which Britons are not necessarily interested in. The EFTA countries are obliged to pay an annual fee for participation in the single market, which is intended to fund European Economic Area and Norwegian Funds. The choice by GB to remain in the single market would require it to respect the EU rules governing its operation,

without the right to vote in the introduction of new regulations. It would also require, besides the freedom of movement of goods, services and capital, to ensure the movement of persons, which the country is not interested in. The Swiss model does not regulate the flow of financial services important to GB. GB bilateral sectoral agreements provide the possibility of introducing new regulations, but the EU itself may not be interested in this solution (Howarth & Quaglia, 2017). In the future agreement between the EU and GB, priority should be given to maintaining a liberalized exchange of services, guaranteeing maximum freedom of action for GB businessmen in the single market, and vice versa. When choosing an option that is similar to the EFTA approach, GB membership in the EU can certainly help to respect the regulation of the Single Market. Regulations in Deep Free Trade Areas also cover the flow of services, but the preferences granted are largely limited. The CETA, signed with Canada, as a reference for regulating future relations between the two entities, introduces non-discrimination obligations, but also limits the scope of the freedom to provide services.

Given the reasons for the Great Britain's dissatisfaction with European Union membership that have influenced the outcome of the referendum, it seems that future relations will be based on the creation of an in-depth free trade area. The agreement will most likely include regulating issues related to the flow of goods, services, capital and people, but, according to the analysis of selected access models to the EU, the scope of the negotiated preferences will be limited compared to the Single Market. At the start of the negotiations, it is unlikely that the relations between the EU and GB will be regulated only on the basis of the MFN, which applies to all member states of the WTO. Adoption of this solution would entail, on the one hand, a significant deterioration of the conditions of access to the EU market, as there would be no preferences arising from EU membership, but on the other hand it should be borne in mind that the WTO tariff, mainly in the scope of non-agricultural products, has already been largely liberalized and in today's trade, non-tariff instruments are much more problematic. In this case, the free movement of capital would remain, but barriers to freedom of service would arise (Howarth & Quaglia, 2017). However, this solution would give GB the greatest freedom and independence from the EU.

The negotiated agreement between the UK and the EU should revise the conditions and protection of competition and state aid, cooperation on international peace, stability and security, the fight against terrorism, cooperation in the field of prosecution of crime and the fight against organized crime, corruption, money laundering, cybercrime, or joint actions for sustainable development and tax cooperation, and contain regulations that guarantee financial stability for the EU. The agreement should also introduce a dispute resolution mechanism (European Council (Art. 50), 2017). These issues are often taken into account in the EU strategic partnership agreements (Strategic Partnership Agreement between the European Union and its Member States, of the one part, and Canada, of the other part, 2016).

The options presented for regulating relations between EU and GB have their strengths and weaknesses. The solution chosen will depend on the will of both parties, and the effects of Brexit may be significant not only for the EU, but also for

the individual Member States, and they will appear first in the political sphere, and then expand to both the social and economic spheres.

4. BREXIT AND TRADE BETWEEN CEECS AND GB – RESULTS OF THE STUDY

By examining the potential impact of Brexit on EU and CEECs trade, the UK trade analysis with the surveyed countries was conducted using the most important indicators on the strength of trade links and the structure of exports and imports.

The starting point for the discussion is the analysis of importance of GB in exports and imports of the EU and CEECs, carried out in the following table.

Table 1. Share of the Great Britain in trade between the European Union and the CEECs in the years 2009-2016 (in %)

Countries	Share of the UK in EU and CEECs exports					Share of the UK in EU and CEECs imports				
	2009	2011	2014	2015	2016	2009	2011	2014	2015	2016
European Union	6.15	5.69	6.18	6.45	6.35	4.29	4.15	3.90	3.77	3.58
Bulgaria	3.00	2.92	3.55	3.95	3.72	2.27	2.62	2.76	2.84	3.46
Czech Republic	5.82	5.43	6.17	6.37	6.22	3.54	3.22	3.27	3.38	3.59
Estonia	2.91	3.03	3.28	3.76	3.27	2.78	4.39	3.86	3.29	3.04
Croatia	3.49	2.50	2.29	2.66	2.12	2.78	2.40	1.67	1.45	1.39
Lithuania	6.82	6.49	6.87	7.29	7.01	2.79	2.87	6.43	4.36	3.86
Latvia	4.38	4.16	6.82	7.18	7.53	2.38	4.13	3.09	2.91	3.04
Poland	8.03	8.24	8.23	8.49	8.29	4.33	3.94	3.89	4.11	3.99
Romania	4.43	4.48	5.78	5.91	5.77	3.01	3.21	3.02	3.23	2.97
Slovakia	5.25	4.17	6.04	6.34	6.93	3.37	1.87	1.64	1.98	2.47
Slovenia	2.68	2.59	2.33	2.49	2.54	1.58	1.95	1.74	1.87	1.88
Hungary	6.58	5.85	4.66	4.97	4.90	2.84	2.91	2.32	2.49	2.48

Source: Eurostat (2017).

In the studied period, GB was a significant trading partner for the EU as well as Poland (PL), Czech Republic (CZ), and Hungary (HU). In the case of the latter country, the importance of exports to GB decreased, however, by about 1.5 p.p. GB's export ratios were at a slightly higher level than imports, which can be interpreted as the presence of stronger EU trade links, including most of the CEE countries, which place their goods on the UK market not being their recipients (Table 1).

EU was a major trading partner for GB, but its share in exports fell by almost 8 p.p. during the period considered. In 2016, EU imports of GB dropped by almost 5 p.p. compared with the year 2015. CEECs were not significant trading partners for GB, although a slight increase in their significance was noted during the period considered (Table 2).

Poland was the most important trading partner of GB in the CEE group. Its share was about one third of the CEECs trade. Countries that had a relatively high share but lower than Poland were Czech Republic, Hungary, Slovakia and Romania. These countries have been selected for further analysis.

Table 2. Participation of the European Union and CEE countries in GB foreign trade in the years 2009-2016 (in %)

Countries	Share of the UE and CEECs in the UK exports					Share of the UE and CEECs in the UK imports				
	2009	2011	2014	2015	2016	2009	2011	2014	2015	2016
European Union	54.73	49.63	47.26	43.82	46.96	48.05	47.86	54.62	55.13	51.91
CEE countries	3.06	3.21	3.32	3.21	3.62	4.24	4.51	4.88	5.19	5.12
Bulgaria	0.09	0.10	0.14	0.12	0.16	0.05	0.07	0.08	0.09	0.09
Czech Republic	0.62	0.59	0.67	0.65	0.71	1.00	1.00	1.12	1.19	1.14
Croatia	0.09	0.05	0.05	0.05	0.05	0.02	0.02	0.02	0.02	0.02
Estonia	0.06	0.09	0.09	0.07	0.08	0.04	0.05	0.04	0.05	0.05
Lithuania	0.07	0.08	0.10	0.09	0.11	0.11	0.14	0.23	0.19	0.17
Latvia	0.05	0.07	0.11	0.07	0.08	0.09	0.09	0.10	0.12	0.14
Poland	1.20	1.33	1.24	1.20	1.39	1.39	1.67	1.83	1.98	1.96
Romania	0.29	0.29	0.31	0.33	0.34	0.23	0.30	0.35	0.38	0.37
Slovakia	0.16	0.17	0.15	0.15	0.17	0.48	0.36	0.46	0.49	0.53
Slovenia	0.08	0.07	0.08	0.07	0.08	0.07	0.08	0.07	0.08	0.09

Source: Eurostat (2017).

The analysis of the export and import structure was carried out in the following part of the paper. The study of the structure of foreign trade was carried out at the HS chapter level and then aggregated to the section level. Canberra metric was used to calculate the similarity of structures. This indicator is calculated according to the formula:

$$d_{il} = \frac{1}{m}\sum_{j=1}^{m}\frac{|q_{ij}-q_{lj}|}{|q_{ij}+q_{lj}|} \quad (1)$$

where:

d_{il} - similarity index of the export structure of the j – commodity group from the i – country;
q - structure index;
i, l - countries;
j - commodity group;
m - number of commodity groups.

This indicator takes values from 0 to 1. The closer the value of the index to 0, the more similar the compared structures (Balicki, 2009).

At first, the similarity between the export structure of the CEE countries and the EU with the UK sales structure to the EU market was compared.

The conducted analysis showed the similarity of GB export structure to the structure of goods supplied by CEECs to the EU. The structure of Czech exports was similar to the UK supplies of the goods for the EU market for vegetable products. Similarly considerable similarity can be noted in almost all countries except Hungary, exporting to the EU market fats and oils of animal and vegetable origin. In the case of industrial products, the similarity of export structure was noted in the plastic articles (Czech Republic and Hungary, slightly smaller in Poland), in the

paper industry products (Czech Republic, Poland and Hungary). Polish exports to the European Union were similar to those of the UK in terms of machinery, mechanical equipment and electrical equipment. A slightly lower degree of similarity in this commodity group can be noted for Romania and Slovakia. In the case of arms, the Czech sales share was very significant in relation to GB exports to the EU market. In the group of different industrial products, the export structure was similar between Great Britain and Slovakia and Hungary (Table 3).

Table 3. The similarity of export structure of selected CEE countries to the European Union market compared to the structure of GB exports in 2016

HS section	CZ	PL	RO	SK	HU
Live animals; animal products	0.37	0.35	0.36	0.47	0.28
Vegetable products	0.12	0.32	0.55	0.42	0.40
Animal or vegetable fats and oils and their cleavage products; edible fats and vegetable waxes	0.20	0.21	0.12	0.14	0.37
Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes	0.32	0.39	0.48	0.45	0.31
Mineral products	0.33	0.41	0.39	0.30	0.44
Products of the chemical or allied industries	0.56	0.41	0.66	0.74	0.43
Plastics and articles thereof; rubber and articles thereof	0.25	0.29	0.43	0.32	0.25
Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers	0.32	0.33	0.32	0.25	0.39
Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork	0.50	0.55	0.82	0.53	0.23
Pulp of wood or of other fibrous cellulosic material; recovered paper or paperboard; paper and paperboard and articles thereof	0.19	0.23	0.41	0.36	0.27
Textiles and textile articles	0.28	0.32	0.41	0.46	0.45
Footwear, headgear, umbrellas, sun umbrellas, walking sticks, seat-sticks, whips, riding-crops and part thereof; prepared feathers, artificial flowers; article of human hair	0.30	0.36	0.43	0.39	0.62
Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware	0.29	0.36	0.37	0.25	0.26
Natural or cultured pearls, precious or semi-precious metals, metals clad with precious metal, imitation of jewellery; coin	0.77	0.57	1.00	0.81	0.85
Base metals and articles of base metal	0.39	0.48	0.41	0.50	0.42
Machinery and mechanical appliances; electrical equipment; parts trereof; sound records and reproducers, television image and sound records and reproducers	0.31	0.15	0.27	0.27	0.37
Vehicles, aircraft, vessels and associated transport equipment	0.70	0.53	0.48	0.74	0.67
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus, clocks and watches; musical instruments, accessories	0.32	0.44	0.38	0.62	0.40
Arms and ammunitions; parts and accessories thereof	0.05	0.74	1.00	0.65	0.65
Miscellaneous manufactured articles	0.44	0.35	0.55	0.26	0.20
Works of art, collectors' pieces and antiques	0.68	0.95	0.68	0.78	0.63

Source: ITC Trade Map (2017).

In the remainder of this chapter, the most important commodity groups exported from GB and CEE countries to the EU are compared.

Table 4. The most important commodity groups[3] being exported from the UK and selected CEE countries to the European Union in 2016.

GB exports to the EU			Czech's exports to the EU		Poland's exports to the EU		Romania's exports to the UE		Slovakia's exports to the EU		Hungary's exports to the EU	
HS chapter	Share (in %)	Potential Customs duty rate after Brexit	HS chapter	Share (in %)	HS chapter	Share (in %)	HS chapter	Share (in %)	HS chapter	Share (in %)	HS chapter	Share (in %)
87	12.45	**2.2**	87	21.68	87	13.28	85	21.77	87	25.57	85	20.69
84	11.33	**0.3**	84	17.11	84	12.19	87	15.86	85	21.30	84	19.10
27	9.22	**0.1**	85	17.08	85	11.92	84	10.49	84	12.40	87	17.05
30	8.08	**0.0**	73	3.79	94	6.51	94	4.84	72	4.26	30	4.22
85	7.06	**0.5**	39	3.41	39	4.92	62	4.58	27	3.85	39	3.84
88	5.07	**0.3**	94	3.07	73	3.10	40	3.66	39	3.24	90	3.52
39	3.91	**1.5**	40	2.17	27	2.73	64	2.96	40	2.92	40	2.53
90	3.55	**0.3**	72	2.13	40	2.35	73	2.63	73	2.45	94	1.99
29	2.77	**1.1**	27	2.10	02	2.32	39	2.32	94	2.15	27	1.63
71	1.98	**0.1**	95	1.98	44	2.20	90	2.15	76	1.59	73	1.43

Source: ITC Trade Map (2017).

Exports from the examined CEE countries to the European Union were characterized by a high concentration of commodity groups confirming their specialization. With the exception of Great Britain (65.4%) and Poland (61.5%), the share of 10 major commodity groups represented over 70% of total exports of these countries (Romania - 71.3%, Czech Republic - 74.5%, Hungary 79.3%). Brexit, even in the case of regulating trade relations solely on the basis of MFN, should not significantly deteriorate the conditions of access to the EU market for goods originating in the United Kingdom, taking into account only the introduction of a common customs tariff relative to British goods (Table 4).

From among the 10 major groups of goods being the subject of delivery from the United Kingdom to the European Union, 7 were found in Hungary and 5 in the other countries (Czech Republic, Poland, Romania and Slovakia). In all the surveyed countries, the leading commodity groups were vehicles,

[3] HS chapters noted in Table 4: 02 – Meat and edible meat offal; 27 Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes; 29 – Organic chemicals; 30 – Pharmaceutical products; 39 – Plastics and articles thereof; 40 – Rubber and articles thereof; 44 – Wood and articles of wood; wood charcoal; 62 – Articles of apparel and clothing accessories, not knitted or crocheted; 64 – Footwear, gaiters and the like; parts of such articles; 71 – Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation of jewellery; coin; 72 – Iron and steel; 73 – Articles of iron or steel; 76 – Aluminium and articles thereof; 84 – Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof; 85 – Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles; 87 – Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof; 88 – Aircraft, spacecraft, and parts thereof; 90 – Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof; 94 – Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like; prefabricated buildings; 95 – Toys, games and sports requisites; parts and accessories thereof.

aircraft and fleets, nuclear reactors, boilers, machinery and mechanical equipment. In each CEE country, one of the three most important groups was electrical machinery and equipment, including image and sound recording. With the exception of Poland (about 38%) and Romania (about 48%), in all other CEE countries, three commodity groups represented more than 50% of their exports to the European Union. In the case of GB, the share of this group represented about 31% of the total exports of this country to the EU (Table 4). The relative deterioration of access conditions to the EU market as a result of GB's exit from the EU may result in improved competitiveness of CEEC's export markets and increased sales of goods belonging to those groups with the greatest similarity in structure. It should also be borne in mind that the goods traded between GB and the CEE countries may be parts and components used by GB for the production of final goods, particularly as they are commodity groups with a relatively high intra-industry trade share.

Further analysis, taking into account the conditions of access to the UK market of CEECs products, compares the structure of CEECs exports to the UK import structure. For this purpose, the Canberra metric was also used.

The export structure of the CEE countries showed no significant similarity with the UK import structure. Only in the case of a few commodity groups in the studied countries, the similarity of structures was noted. The greatest similarity with the British import structure was noted in the fats and oils of animal and plant origin for the Czech Republic and Poland. Quite similarity was noted for plastic articles exported from Poland as compared to GB's imports as well as paper products. Polish exports of goods classified as mechanical and electrical machinery and equipment were also characterized by a high similarity ratio to GB imports. In the case of goods exported from the Czech Republic to GB, the greatest similarity with GB imports was recorded for artificial and metal jewellery and precious stones. A relatively low similarity ratio between Hungarian exports and British imports was noted for various industrial goods. The analysis has shown that CEE exports are limited to the UK import structure to a small extent, which also confirms the low participation of this group of countries in trade with GB (Table 5).

The last part of the analysis highlights the most important commodity groups exported by the CEE countries to the United Kingdom.

Exports from CEECs to GB were characterized by considerable similarity of departments and a high concentration of commodity groups. Slovakia's exports to GB classified in the top 10 divisions accounted for nearly 92% of this country's sales to the UK market. A slightly lower concentration of commodity groups (over 80%) was reported for the Czech Republic, Romania and Hungary. As in the case of exports to the EU, Polish exports to GB were also characterized by the lowest concentration index - the qualified goods delivered to the top 10 groups accounted for about 67% of total exports to that country. On the basis of the current tariff applied to the commodity groups, relatively low tariffs are assigned, i.e. after a change in the EU-GB regulatory regime, the conditions of access to

the UK market should not contribute to a significant deterioration of the CEE market (Table 6). It should be borne in mind, however, that research only included tariff measures as barriers to GB market access, bypassing potential non-tariff barriers that are much more important in today's international trade.

Table 5. Similarity of export structure of selected CEE countries with GB import structure in 2016

HS section	CZ	PL	RO	SK	HU
Live animals; animal products	0.76	0.40	0.47	0.79	0.64
Vegetable products	0.73	0.44	0.66	0.90	0.65
Animal or vegetable fats and oils and their cleavage products; edible fats and vegetable waxes	0.04	0.28	0.95	0.90	0.52
Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes	0.65	0.34	0.59	0.80	0.40
Mineral products	0.83	0.74	0.93	0.78	0.93
Products of the chemical or allied industries	0.72	0.59	0.85	0.80	0.52
Plastics and articles thereof; rubber and articles thereof	0.43	0.25	0.55	0.47	0.36
Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers	0.78	0.48	0.70	0.81	0.71
Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork	0.79	0.71	0.67	0.86	0.56
Pulp of wood or of other fibrous cellulosic material; recovered paper or paperboard; paper and paperboard and articles thereof	0.55	0.23	0.63	0.53	0.76
Textiles and textile articles	0.37	0.48	0.59	0.68	0.63
Footwear, headgear, umbrellas, sun umbrellas, walking sticks, seat-sticks, whips, riding-crops and part thereof; prepared feathers, artificial flowers; article of human hair	0.46	0.42	0.75	0.76	0.89
Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware	0.16	0.40	0.62	0.67	0.36
Natural or cultured pearls, precious or semi-precious metals, metals clad with precious metal, imitation of jewellery; coin	0.25	0.87	0.43	0.57	0.87
Base metals and articles of base metal	0.51	0.45	0.63	0.74	0.58
Machinery and mechanical appliances; electrical equipment; parts trereof; sound records and reproducers, television image and sound records and reproducers	0.31	0.14	0.29	0.36	0.38
Vehicles, aircraft, vessels and associated transport equipment	0.50	0.35	0.50	0.73	0.60
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus, clocks and watches; musical instruments, accessories	0.52	0.48	0.60	0.77	0.75
Arms and ammunitions; parts and accessories thereof	0.61	0.82	1.00	0.99	1.00
Miscellaneous manufactured articles	0.37	0.37	0.54	0.32	0.18
Works of art, collectors' pieces and antiques	0.51	1.00	0.73	0.96	0.54

Source: ITC Trade Map (2017).

Table 6. The most important commodity groups[4] being imported by Great Britain from the selected CEE countries in 2016

Czech's exports to the UK			Poland's exports to the UK			Romania's exports to the UK			Slovakia's exports to the UK			Hungary's exports to the UK		
HS Ch.	Share (%)	CDR* (%)	HS Ch.	Share (%)	CDR* (%)	HS Ch.	Share (%)	CDR* (%)	HS Ch.	Share (%)	CDR* (%)	HS Ch.	Share (%)	CDR* (%)
87	32.8	2.2	84	14.8	0.3	85	21.1	0.5	87	46.8	2.2	85	24.9	0.5
84	20.1	7.2	87	14.7	2.2	87	16.6	2.2	85	20.5	0.5	84	21.4	0.3
85	18.7	0.5	85	12.7	0.5	62	15.6	3.3	27	9.9	1.1	87	14.3	2.2
95	3.0	0.3	94	6.6	0.3	84	8.9	0.3	84	6.3	0.3	90	6.3	0.3
73	2.5	0.4	02	3.6	15.9	94	5.8	0.3	40	2.3	0.6	30	5.9	0.0
40	2.3	0.6	71	3.4	0.1	40	3.6	0.6	94	1.6	0.3	40	2.6	0.6
94	1.9	0.3	39	3.1	1.5	30	2.9	0.0	73	1.3	0.4	39	2.3	1.5
39	1.6	1.5	33	3.0	0.5	61	2.8	3.4	39	1.3	1.5	69	1.7	1.5
90	1.6	0.3	44	3.0	0.5	73	2.4	0.4	83	1.0	0.5	94	1.6	0.3
30	1.1	0.0	18	2.4	0.6	90	2.4	0.3	90	0.9	0.3	76	1.6	1.6

* CDR – Customs duty rate.
Source: ITC Trade Map (2017).

5. CONCLUSIONS

Brexit and its effects on the economy of GB and other related entities are quite often the subject of research. This is important because, for the first time in the history of the EU, the Member State playing an important role in the integration grouping decided to leave it. Changing the status of GB will require re-establishing trade relations with the EU and will likely affect trade between the two partners. According to the analysis, the most probable solution for trade relations between the EU and GB will be the deepening of the free trade area. It can be time-consuming to reach an agreement on this subject, and the trade preferences obtained are significantly limited in relation to what is currently available. Failure to do so may further aggravate the deterioration in the access conditions to the EU and GB market. The rates referred to in the article take account of this situation.

The conducted research shows that the trade between GB and CEECs is asymmetric. Great Britain is a much more important trading partner for the CEE countries than the whole group of these countries for the Great Britain. Examining the export structure of GB goods relative to CEE sales to the EU market showed similarities in commodity groups at the departmental and HS sections level. In addition, there was also a significant concentration in exports, as measured by the share of the top 10 commodity groups in total deliveries to the EU market. A similar situation occurs when CEE exports are compared with GB imports, but the similarity of

[4] Most commodity groups are covered with those that were mentioned in a note 3. So only the ones which did not appear in the exports of the CEECs to the EU were noted. These are the following HS chapters: 18 – Cocoa and cocoa preparations; 33 – Essential oils and resinoids; perfumery, cosmetic or toilet preparations; 61 – Articles of apparel and clothing accessories, knitted and crocheted; 69 – Ceramic products; 83 – Miscellaneous articles of base metal.

structures is small. Among the CEE countries, the most diversified structure of exports, i.e. the lowest level of its concentration, was recorded in Poland. Changing access conditions to the UK market and introducing tariffs should not significantly affect the volume of exports from the surveyed countries to the UK, but the final conclusions need to be taken into account in analysing non-tariff instruments. This study is of a preliminary nature and requires a comparison of the exports and imports between the audited entities at the level of the disaggregated data.

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The European Energy Policy and its Influence on the Diversification of the Fuel Market[1]

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Summary:

The aim of this article is to analyze energy policy in the European Union in terms of energy security, in the light of strategic programs developed integrally linking climate goals of energy policy, treated as a sector of key importance for the development of low-carbon economy. The main problem of this article is to prove, based on the interpretation of legal acts and program documents of the EU, that the countries which are at different levels of economic development and have different energy capability can achieve strategic aims concerning climate and energy security in the long run. The analysis showed the importance of energy sector in fighting with global warming. It can be achieved by diversifying the systems of energy production and using innovative solutions. The effective and successful climate and energy policy requires creating the conditions for energy solidarity. It can be done by building some infrastructure as well as transferring innovative solutions within the scope of production and energy distribution. Societal awareness about the necessity of improving energy effectiveness is also important. It can be achieved by a wider usage of alternative sources and innovative technology solutions which aim to reduce the pressure of sector on the environment.

Keywords: sustainability; sustainable development; energy policy; EU
JEL codes: K32

1. INTRODUCTION

Since the end of the Word War II a common energy policy has been developing in Europe. Its current state has been shaped by common interests of particular European countries strengthened by numerous crises on the international energy market. Due to low fossil fuel deposits the European Union is highly dependent on importing fuel from third countries. It might be related to the continuity of

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supply being increasingly threatened because the supplying countries often suffer from political and economic instability. In order to minimize the risk there is not only a need to diversify the supply sources but also to implement investment solutions related to renewable energy sources. It would partially reduce the necessity to purchase resources from countries outside the European Union, but also significantly improve the condition of natural environment. Mining and processing fossil fuels has contributed to a deterioration of the state of the environment particularly in relation to the constant growth of the greenhouse effect. The 20th century noted a twelvefold growth of the utilization of fossil fuels worldwide, at the same time their mining quantities increased 34 times. Currently, an average EU citizen annually consumes 15 tonnes of resources and produces 5 tonnes of waste, out of which only half is recycled. As a result, the constantly rising need of limited resources contributes to an increase and instability of prices often bringing a danger of uncertainty of supplies. For those reasons, the energy security policy needs to be treated as the main determinant of national security.

2. EUROPEAN UNION'S ENERGY SITUATION

During the 50 years of the European Coal and Steel Community's existence, the situation on the common energy market has undergone significant changes. At the early stages hard coal held the dominant role on the energy market since it was regarded as a resource of a vital importance to the Union. Due to a significant increase of its mining cost and more competitive resources emerging, its importance has been diminishing gradually since the 1960s. Petroleum and natural gas have been gaining solid positions on the energy market. These fuels however, are scarce within the Union's borders. Hence, along with the growth of their share in the energy production structure, the countries' dependence on their import has been rising. The dangers resulting from that fact could particularly be noted during the years of the oil crisis. Nevertheless, fossil fuels are still the basis of the EU's energy balance. In 2015 the biggest share in the EU's primary energy balance was held by petroleum (approximately 38%), natural gas (24%) and coal (approx. 17%). Nuclear power constituted 12% and renewable energy – 9% (Eurostat, 2016). In the forecasts of the International Energy Agency (IEA) for 2030, the only significant predicted change related to fossil fuels is an increased utilization of natural gas and energy from renewable sources. The tendency of increasing gas use is a result of at least two factors: gas emissivity being lower than that of coal and petroleum as well as a predicted depletion of oil deposits. The documented and potential fossil fuel deposits currently greatly depend on implementation of technologies allowing to mine those resources from deeper and less accessible geological layers. It is enough to note that with, for example, nuclear power production, introducing fast and high-temperature IV generation reactors, which are characterized by high burn efficiency, would make uranium deposits last more than a dozen times longer than indicated by current prognoses.

Currently, the EU imports approximately 50% of the consumed energy. However, it is predicted that as soon as in 2030 that percentage will increase to

70% (assuming that the demand increases by 25%), if decisive actions towards changing the current state are not taken.

Petroleum deposits can be scarcely found within the borders of the European Union, mostly in the North Sea, and were, until now, in possession of the UK (approx. 2% of that resource's deposits worldwide). It means that since the UK left, the EU has become almost entirely dependent on oil import. The main suppliers of oil for the EU are still the countries of the Middle East (40% of supplies), the Russian Federation (33%) and Norway (16%) (Dąbrowska, 2010). It is important to note that Norway's share in the supplies is due to decrease gradually as the North Sea petroleum deposits deplete, the reserves of which are estimated to last for as short as 8 years. As a result, according the opinion of the European Economic and Social Committee, in the coming decades, the significance of petroleum as an energy source in the EU is due to decrease gradually. As a result of actions increasing the share of renewable energy sources in the energy balance – including the 3rd and 4th generation – as well as implementing technologies related to carbon capture and storage, the EU's demand for oil is due to decrease by at least 50%.

In the recent years, among the EU's energy sources, natural gas's significance has increased. It is estimated that from 2020 to 2030 it will be the source of more than a half of produced electricity, which is undoubtedly due to contribute to the Union's dependence on that resource's supplies, particularly while the use of coal is lower. It is predicted that as a result, import will increase from 220 billion m^3 in 2010 to over 400 billion m^3 (in the low-use variant) and even 650 billion m^3 (high use) in 2030. At the same time, domestic mining is due to decrease considerably from 260 billion m^3 to barely 160 billion m^3 (Rychlicki, Siemek, 2008).

The largest suppliers of natural gas for the EU are the Russian Federation (40%), Algeria (30%), Norway (23%) and to a lesser degree, Libya and Egypt. Russia occupies the first place on the list of natural gas exporters worldwide. Along with the gas purchased from countries in the central Asia, for the purpose of further distribution, Russia supplies 33% of natural gas in international trade. The mined Russian deposits transfer gas to the consumer network in the European Union via pipeline mains:

- The Yamal pipeline – through Belarus and Poland to Germany with a branch to the Baltic Sea shore.
- The Soyuz pipeline – though Ukraine, Slovakia and Czech Republic to Germany, with the branching Blue Stream pipeline through the Black Sea to Turkey. Moreover, the resources from deposits in Turkmenistan, Kirgizstan and Afghanistan are transited to Balkan countries (Romania, Bulgaria, Greece, Serbia, Macedonia and Bosnia and Herzegovina) through Uzbekistan, Kazakhstan and Russia (along with resources from transit countries).
- The Nord Stream pipeline, which goes from the Wyborg compressor station in the Portovaya Bay along the bottom of the Baltic Sea to Greifswald in Germany. The length of the undersea pipeline is 1222 km, out of which 1,5 km is within Russian inland area, 121,8 within Russian territorial waters, 1,4 km within Russian economic zone, 375,3 within Finnish economic zone, 506,4

km within Swedish economic zone, 87,7 km within Danish territorial waters, 49,4 km within German territorial waters and 0,5 km within German inland area. The pipeline has two parallel lines, each with a capacity of 27,5 billion m^3 of gas per year (Nebras Al – Masny, 2015).

The construction of the Nord Stream pipeline aroused much controversy and divided the Union's member countries. The opponents of the pipeline's construction emphasized the marginalization of the former transit countries (Ukraine, Slovakia, Czech Republic, Belarus and Poland) as well as the danger of excessive dependence on Russian gas, which might be used by the Russian Federation not only as an economic tool but also as a political one in particular. Although neither the European Union nor any country (except Germany) which might be affected by the pipeline's construction have agreed to the construction of the Nord Stream 2 pipeline, the first technical and environmental research have begun and the whole investment is to be completed before the end of 2019.

An analysis of the specifics of natural gas trade which is based on long-term contracts binding the supplier with the customer indicates explicitly that the significance of "blue fuel" is due to be high in the coming decades. In order to meet the rising demand, it should be expected that the share of liquid gas in international trade will grow, as well as the number of LNG terminals. Presently, approx. 40 installations for natural gas liquefaction and nearly 60 terminals for LNG regasification are being constructed. It is certainly due to contribute to the development of the LNG market, which will become increasingly common because of greater diversification possibilities and greater trade flexibility (most of LNG transactions are spot transactions) than those with traditional gas transit via gas pipelines.

A significant role in the process of Europe's unification was played by solid fuels. In order to meet the demand for those resources, the European Coal and Steel Community encouraged to increase coal mining by opening new mines as well as signing new long-term contracts for coal supplies. The coal industry however, at the end of the 1960s, began its descending phase, the cause of which was the competition of coal from outside of the EU and other fuels used for energy and heat production. As a result of that process the production of coal in the ECSC's member countries decreased considerably and the interest in petroleum and gas increased. Another reason why some countries are turning back from that resource is the fact that during the coal burning process, significant amounts of CO_2 are emitted into the atmosphere which is regarded as the main cause of the greenhouse effect. It is a dilemma related not only to energy security but also ecology, climate and hundreds of thousands of workplaces. Mainly for that reason, attempts are being made to replace coal with energy from renewable sources. However, in Poland, which is the largest producer of hard coal in the EU, that process might take even several years. Coal plays and will play a huge role in the country's energy balance, hence there is a need to develop solutions, which can minimize its negative effects on the environment in compliance with the Sustainable Development Strategy.

The current worldwide trends of implementing low-emission solutions will moreover contribute to continuing cost-efficiency of coal-based energy production.

Those aims are related to increasing energy efficiency by 20% by 2020 in comparison to the base year of 1990 and also achieving (within the same time frame) a reduction of greenhouse gases emission by 20% as well as increasing the share of energy from renewable sources in the energy balance to 20%. While formulating strategic goals, the EU will have to take into account a decrease of CO_2 emission in the USA and China after 2030, as a result of implementing new technologies, as well as discontinuing old ones. It should then be expected that the significance of coal in traditional energy technologies will decrease until a "clean coal" technology (such as Integrated Gasification Combined Cycle) is fully implemented, as a result of which it will be possible to gasify coal underground, which means turning hard fuel into gas which includes hydrogen, methane and carbon oxide, while capturing and pressing CO_2 into geological layers (the CCS technology). Among the research in the area of clean coal technologies there are unique solutions related to the process of coal liquefaction being developed. Those are supposed to make it possible to effectively produce synthetic gasoline for internal combustion engines (World Energy, 2007). The infrastructure allowing to transport, press and mine deposits in geological layers in countries using coal for energy production should be expected to develop. The development of coal technologies will contribute to a growth of interest in hydrogen, which may play a substantial role in the process of becoming a zero-emission society.

Nuclear power, similarly to coal, was an integral part of the process of forming of the EU. The establishment of the European Atomic Energy Community (Euratom) was related to a willingness to reduce the Union's dependence on petroleum supplies from the Middle East. The investments started at that time, aiming at constructing and maintaining nuclear power plants brought the expected results. In the EU there are currently 131 working reactors with a combined power of 122,234 MW, which produced 12% of energy in 2015. Nuclear power plants are working in half (14 of 28) of the Union's countries. After the tragic events in Japan, the EU decided to re-evaluate the condition of the reactors in the member countries, although such actions have been performed since 1999, when Euratom accepted, among others, the resolutions of the Convention on Nuclear Safety from 1994 issued by the International Atomic Energy Agency at United Nations. The Union joined the Convention on the 30th of January 2000. Moreover, some of the European countries signed it as early as in 1994.

The current situation related to nuclear power production in the EU varies: Bulgaria, France, Slovakia and Finland encourage construction of new nuclear reactors. Several EU countries renewed the debate concerning prolonging of the existing structures' functioning, replacing or constructing (Netherlands, Poland, Sweden and Lithuania), whereas Belgium, Germany and Spain want to gradually reduce or stop using nuclear power. During the recent years' debates, the opinion opposing the construction of new structures has been dominant, which could be seen in the decision of the German government in March of 2011 concerning shutting down seven out of seventeen working reactors. France limited its actions to commissioning an independent administrative body, namely the Nuclear Safety Authority,

a special safety review of all reactors in terms of: possibility of an earthquake, flood, blackout or loss of cooling in order to "identify any possible improvements".

With nuclear power, like with other energy sources, there is the dilemma of lack of self-sustainability. It particularly concerns uranium because only 2% of the world deposits are owned by the EU, which makes the Union almost entirely dependent on foreign supplies. However, the European nuclear industry controls the whole fuel production cycle, including reusing of the fission products. The development of high-temperature, IV generation reactors increases not only safety, but also the efficiency of the plants. What seems particularly interesting are the high-temperature, graphite-helium reactors, which supply not only the produced energy, but also high-temperature heat used for coal gasification as an example. Such solutions seem to be particularly interesting for countries owning substantial deposits of said resource, such as Poland.

Between 2004 and 2014 (except 2011) the countries of the EU-28 noted evident growth dynamics in the amount of energy from renewable sources. For the EU-28 it was highest in 2010 and amounted to 11.8% (for Poland – 13.7% in 2012). In the case of primary energy acquisition in general, in the countries of the EU-28, in the range of alternative energy, the trend is decreasing. Between 2008 and 2014, the share of energy from renewable sources in the primary energy in general increased from 16% to over 22% in the EU-28 (from 7.6% to 11.4% in Poland). At the same time, primary energy acquisition from non-renewable sources increased by 29% in the EU-28 and by 57% in Poland, so the growth rate of green energy, as compared to conventional, is definitely insufficient. The leader in terms of renewable energy's share in the national energy mix in 2014 was Sweden, with a share of 52.6%, then Latvia and Finland (both 38.7%). These were followed by Austria (33.1%) and Denmark (29.2%). Countries with lowest shares were Luxemburg (4.5%), Malta (4.7%) and Holland (5.5%). Bulgaria, the Czech Republic, Estonia, Croatia, Italy, Lithuania, Romania, Finland and Sweden already achieved their desired goals for 2020 in 2014. Denmark and Austria are closest to their goals (approx. 1 percentage point), while France, Holland and Ireland are furthest (8.7, 8.5 and 7.4 percentage points respectively). The share of renewable energy in the final gross energy consumption in Germany in 2014 – despite their almost 30% share in the energy production mix – was only 13.8%, while the determined goal for Germany for 2020 is 18% (Eurostat, 2016).

Rational use of non-conventional resources is one of the vital components of sustainable development (Urbaniec, 2015), which yields measurable energy and ecology related results. It contributes not only to an improvement of the environment's state, due to a reduction in emission and the produced waste, but also results in constant resource reproduction. It is assumed that in the coming years a significant development of photovoltaics will be noted. By 2020, new photovoltaic cells will be supplying as much energy as 7.77 million tonnes of petroleum (Mtoe), assuming that 1 tonne of petroleum yields 11.63 MWh of energy. In 2014 solar energy production constituted approx. 10% of total renewable energy in Europe. It was the third main source of energy preceded by water and wind energy.

As can be seen in the report (Renewable energy in Europe, 2016), the development of renewable energy has already contributed to CO_2 emission's reduction of 388 Mt (which is 1% of the world production). It can be best observed in the electricity sector, the share of which in the total emission is as much as 75%, while the share of the logistics sector is estimated to be only 9% of emission. The report explicitly indicates that the utilization of renewable energy in Europe gradually grows, but at an insufficient rate. However, it was observed that for the first time the utilization of fossil fuels decreased by 110 million tonnes of petroleum equivalent (Mtoe) in 2014.

A systematic growth of renewable energy investments' cost effectiveness, along with developed distribution networks will provide more energy stability eliminating the risk of events such as blackouts. Moreover, a technological revolution in the energy sector will contribute to a development of the remaining sectors of the economy, including energy agriculture, which increases the utilization of agricultural fallows as well as environmental waste. Growth will be noted in the use of energy cultivation as well as other plants such as algae, which need phosphates or carbon dioxide in order to grow and can ultimately be used for biofuel production. Water is undoubtedly a resource, the significance of which is due to rise continually. In the situation when its deficit is constantly rising, and its quality decreasing, the deposits of drinkable water may become a cause of numerous conflicts and competition among nations (Renewable Energy in Europe, 2016).

The European Union's energy balance in general does not reflect the specifics of energy balances of particular member countries, the varied nature of which makes it more difficult to formulate a common energy policy, at the same time contributing to a lack of internal consolidation. The Union's members differ in terms of energy balances' structure, the degree of dependence on import and the level of diversification of energy suppliers. The majority of EU countries base their energy balances mostly on petroleum, among others: Germany, Spain, Italy, Austria, Ireland and Holland. Natural gas is the second most important resource being the dominant fuel in the energy balances of five countries: Holland, Romania, Hungary and Great Britain. For Poland, Estonia, the Czech Republic and Bulgaria, the base of their energy balances is still coal. Twelve of the member countries do not own nuclear power, which is the base of energy production for: France, Slovakia, Belgium, Hungary and Sweden. The islands of Cyprus and Malta are entirely dependent on resource import. A very high degree of import dependence can be noted in Spain (81% of consumed energy), Italy (84.5%), Ireland (89.5%), Slovakia (69%), Bulgaria (52%) and France (51%). Poland's dependence on import is the lowest among the Union's members (excluding Denmark, which is a net exporter), followed by the Czech Republic (25%) and Romania (32%). (Eurostat,. 2016)

A significant problem of Middle Eastern Europe's countries, which means mainly the new members of the EU, is dependence on one supplier: Russia. The supplies of natural gas from Russia constitute 79% of gas consumption in the Czech Republic, 100% in Slovakia, 54% in Hungary, 74% in Austria, 96% in Bulgaria and 47% in Poland. (Eurostat, 2016)

In order to achieve the desired security level, the Union has to face the changing world situation related to the growing monopolization of the energy market, alongside with competition over resources, i.a. as a result of depletion of low and average-size resource deposits and the fluctuation of resource prices. China and India are becoming important competitors for the Union as they increasingly penetrate the resource markets of the Union's current and potential suppliers (North Africa, the Middle East and Central Asia). It is estimated that by 2030 the energy absorption of Chinese and Indian economies will be responsible for half of the world's energy demand growth, which will rise from the current level by approx. 55%. As a result of depletion of the world's deposits, the said resources will in time be accumulated within territories of several countries, which will increasingly shape the resources' prices. The competition over oil and natural gas deposits in the Arctic is also due to intensify because Denmark, Norway, the USA, Canada and Russia are struggling to claim their rights to those deposits. It was shown by those countries' earlier actions, which aimed at indicating that the Lomonosov Ridge is an extension of their continental shelf. The warming climate and melting glaciers can, according to geologists, uncover previously hidden oil and gas deposits, constituting even 14% and 30% of the world's deposits respectively. Regardless of those factors it should be expected that the number of LNG terminals within the borders of the Russian Federation are due to grow, which will be a result of worldwide trends related to the growth of the use of gas and Russia's willingness to remain the leader on this market.

Secondly, in the relations with the EU's main suppliers, particularly with Russia, which is the largest single supplier of gas and oil to the EU (40% and 33% of EU's import respectively), there are numerous problematic issues emerging. Although the Union receives 60% of Russia's gas export, the relations between the parties are tense. Taking into account the degree of mutual dependence, using fuels has become a vital mechanism of foreign policy. The Russian company Gazprom, being an exclusive gas exporter, has often been used as the Kremlin's tool in relations with other countries. Energy crises between Russia and Ukraine in 2006 and 2009 undermine Russia's position as a reliable partner. Moreover, the manner in which Russian companies operate is far from European standards. Gazprom abuses its dominant position, aims at maintaining control over gas import from Central Asia, does not use transparent price policy and uses various proxy companies in order to gain assets on European market, at the same time limiting access to its own assets for foreign investors.

Thirdly, an unfinished liberalization of the internal energy market still remains a challenge. The attempts thus far made by the European Commission, particularly a proposition of "unbundling" of production, distribution from industry, have encountered severe objection of several member countries (i.a. Germany and Italy). The said countries argued that by conducting the separation, they are weakening their position in negotiations with producer countries, where energy export is often monopolized by the state. The strategic nature of fuels for the national security results in the fact that in the majority of the EU countries, at least part of the energy industry remains in possession of the state. In current conditions it is unlikely that said countries would waive

their control over energy sectors in favour of Brussels or commercial entities. Those concerns make market liberalization much more difficult, and it would give consumers a complete freedom to choose a supplier, followed by (in a longer time-frame) prices' optimization and a better energy security. European Commission (2006).

3. EUROPEAN UNION'S ENERGY SECURITY POLICY

The idea of a common energy policy emerged in 1964, when members of the European Economic Community signed a protocol concerning actions necessary to formulate the policy's common rules. But until the outbreak of the oil crisis, no constructive actions had been taken, except obligating the countries to maintain oil and petroleum product reserves on a level equivalent to 65 days of average daily use in case the supplies stop. A breakthrough came as late as in the 1980s, when as a result of oil crises the prices of petroleum suddenly and drastically rose. In response, in 1974, the European Committee prepared a report on common energy policy and a long term action plan for the next 11 years. It assumed a reduction of fuel import from 63% to 40%, including petroleum from 98% to 70%, and reducing energy consumption by 15% (Council Resolution, 1975).

In the 1980s two resolutions were passed, determining the level of oil consumption per GDP unit, reducing the share of petroleum in energy consumption and increasing the share of renewable energy in the energy balance. The works on energy market integration started to intensify as late as at the beginning of the 1990s, when propositions related to energy market liberalization were presented. In 1995 the European Commission issued a green paper entitled *Towards European Union's energy policy*, where it was emphasized that the only effective way to ensure competitiveness of the Union's economy and energy security, is a complete liberalization of electricity and gas markets. The document also mentions extending goals by environment protection against harmful effects of producing and distributing energy. As stated, the actions of the Union should be aimed at further diversification of energy sources, securing funds in case of a crisis, increasing proximity of energy policies of the members countries, finalizing the establishment of a common energy market and support programmes related to promoting the European approach to the international energy cooperation. (Dobroczyńska A., 2003)

The Treaty establishing the European Union signed in Maastricht on the 7th of February 1992 was the first union document to contain legal regulations related directly or indirectly to energy production. The extension of the Union's activity by energy production was reflected in the first chapter, article 3, item 1 letter "u", which provides, on conditions and in accordance with the schedule estimated in the Treaty, assets for the areas of energy production, civil protection and tourism. The letter "o" of said article also indirectly refers to energy production and encourages completing the Union's goals by creating and developing trans-european networks, including energy networks. A reference to energy production can also be found in the "natural environment" chapter, which postulates completing goals related to

environment also by choosing a member country among various energy sources in creating the energy balance. (The Treaty, 1992)

Subsequent considerable changes in the Union's energy policy were brought by the 96/92/WE directive from the 19th of December 1996 concerning common regulations of the internal electricity market. It included i.a. regulations related to production, transfer and distribution of electricity and the nature of organizing, functioning and access to the electricity sector. The said directive allowed authorized third parties to access the electricity networks (referred to as TPA – Third Party Access), allowing consumers to freely choose their supplier regardless of their location. Moreover, the directive obliged the member countries to appoint independent operators of transit systems and obliged them to fulfil requirements concerning public service providers such as: guarantee, quality and price of supplies, environmental obligations and providing access to the service for potential customers in a given area. At the same time, system operators became responsible for safety, reliability and effectiveness of the systems. The time of the directive's implementation was not identical for all of the Union's countries. The exception applied to three countries, namely Belgium, Ireland and Greece, and due to the specifics of their markets, the allotted time was longer. (Lot G., Michalski D., 2000)

During the European Union's summit in Lisbon in 2000, a general plan of competition and economy development, so-called Lisbon Strategy was adopted. Its purpose was to create the world's fastest growing economy. The plan also included issues related to integration and liberalization of the power and gas sector. The European Council asked the Union's countries and institutions to make energy market freeing faster, while the European Commission proposed a full liberalization of the energy market by 2004. During the summit of the European Council in Stockholm, a disagreement with the proposition from Lisbon was voiced by France, which strongly opposed the imposition of liberalization deadlines, at the same time indicating the first differences in standpoints towards the Union's assumptions. Although the most important assumptions of the strategy were not achieved, it should be emphasised its positive influence on the consistent reduction of greenhouse gases emission, decrease of the economy's energy consumption and a systematic growth of renewable energy's share in the total energy production.

The next stage of forming the Union's common energy policy was publishing a green paper entitled*: A European Strategy for Sustainable, Competitive and Secure Energy* by the European Committee in 2006. (Green Paper, 2006). The said document defined six priorities related to energy production: forming of electricity and gas internal markets, security of energy supplies, sustainable, effective and varied energy structure, preventing global warming, preparing a strategic technological plan for the energy sector, working out a consistent common external energy policy. Most of the propositions found in the document were accepted by the member countries, but non-governmental organisations expressed their criticism. The main objection was related to overgeneralisation and the priorities not being formulated precisely. In response, the European Council adopted an Approximate List

of Actions for the European energy policy in the same year. As a result, the European Committee issued a statement to the European Council and the European Parliament, entitled: the European energy policy. The package defined the key aims, the realization of which will allow to meet the requirements related to greenhouse gases emission, energy supplies security, reducing the dependence on import and forming an internal market. On this basis, the heads of states and governments accepted an action plan related to energy in 2007. It defined the following goals:

- Reducing the emission of greenhouse gases by 20% by 2020 in relation to 1990.
- Increasing energy-efficiency and effectiveness by 20% by 2020.
- Development of new technologies and increasing the share of renewable energy sources in the total energy production in the EU by 20% by 2020 (Energy Strategy, 2007).

Significant changes in the functioning of the energy market were brought by the treaty on the European Union's functioning, so-called Treaty of Lisbon, which came into force on the 1st of December 2009, and for the first time distincted a separate title related to energy production. The Union, as stated in the document, is tasked with securing the functioning of the energy market and the security of its supplies. At the same time, it should support energy effectiveness, energy efficiency, development of new and renewable energy sources and the mutual connections among networks. The treaty clearly defined the area of competence related to actions in the energy sector. Establishing competition regulations necessary for internal market functioning belongs solely to the European Union. The remaining competences in the area of energy, environment, internal market and the trans-European energy networks were to be shared between the Union and the member countries.

This issue brought up the first clear differences among the Union's member countries. As a result of Germany and France's pressure, an additional, less intrusive for monopolistic companies, solution for the issue of separation was accepted. It appointed an independent transit operator (ITO). Pursuant to the package, Agency for Cooperation of Energy Regulators (ACER) was established, the purpose of which was coordinating the activity of associations, gas transmission system operators (ENTSOG) and electricity (ENTSOE). Their purpose was i.a. implementing the same procedures in all member countries in crisis situations.

An issue equally important for the common market turned out to be working out uniform mechanisms of energy solidarity, which realized the contents of article 100 of the Treaty of Lisbon, established on the initiative of Poland. As a result, works on regulations concerning gas supply security were started. The European Parliament Committee on Industry, Research and Energy, issued a report, which proposes obligating the Union to react in case the daily supply is cut by 10% in regions, which are designated by the regulation (20% in case of the whole EU). Additionally, in case of a state of emergency, countries are to guarantee mutual access to storage installations. Those decisions began the process of forming energy solidarity mechanisms.

It was expected, that the Treaty would lead to forming an effective emergency reaction mechanism, by expanding the cross-border networks among countries, as well as increasing the reserves, which could be used in the Union's countries in case of an energy crisis. The process of crisis reaction in case the fuel supplies to the European Union underwent a redefinition. Individual interests of particular countries signing long-term contracts with Russia should be replaced by solidarity and a unified voice of all the Union's members. The gas crisis of January 2009 between Russia and Ukraine clearly showed that the European Union is incapable of achieving long-term strategic goals in the range of energy security and ensuring supply security on union level for all the member countries.

As a result of the adopted resolutions, it became necessary to increase the funds for energy-related projects: development of the energy infrastructure (modernisation of the existing pipelines, construction of interconnectors, construction of strategic pipelines such as Nabucco), or increasing the number of LNG terminals. International climatic obligations have to lead to the development of the CCS technology and increasing the share of renewable energy sources, while improving energy effectiveness, forcing an increased interest in the development of "energy recycling" at the same time.

The European strategy for climate-energy security is currently based on the so-called third energy package accepted in 2009. The goals of this package were also included in the "Europe 2020" strategy and were called "2020-20 Program". It assumes lowering greenhouse gases emission, increasing the utilization of renewable energy and improving energy effectiveness by 2020. The future of UE's energy policy was first defined in the so-called 2050 energy roadmap, establishing the framework of long-term actions in the energy production sector, and then in the European Commission's announcement from January 2014, which defined plans for a shorter term, namely the years 2020-2030. The two basic goals were further reduction of greenhouse gases emission and increasing the share of renewable energy. The remaining key issues mentioned in the announcement included improving energy effectiveness, ensuring competitive energy prices, completing the construction of an internal, fully liberalized energy market and improving the security of supplies, taking into account elimination of events when member countries are isolated from electricity and gas networks. The above resolutions are supplemented by the European energy security strategy (European strategy, 2014), which is assumed to constitute an integral part of the EU's energy strategy until 2030. Binding targets on union level are related to:

- Reducing internal emission of greenhouse gases by 2030 by at least 40% in comparison to the level noted in 1990 (reformed emission trading system – ETS).
- Increasing the share of energy from renewable sources in the energy consumed in the EU to at least 27%.
- Improving the energy effectiveness in 2030 in the amount of 27%.

The member countries were obliged to achieve the above goals, and were left with a choice related to establishing their own higher state goals. The conclusions

once more emphasized the realization of an internal energy market and appointed tasks for the European Commission and the union members related to intersystem connections with the European electricity and gas networks. Further actions aiming at reducing the EU's energy dependence and increasing its energy security were also approved. A vital element of the new framework of the climate-energy policy, included in the above conclusions is a reformed management system, which is to allow a better coordination of state politics and support the development of regional cooperation among member countries.

4. CONCLUSIONS

Europe has made huge progress in the process of establishing of an internal energy market with an improved connection network, decreasing energy consumption and realizing a sustainable energy mix. However, the issues of energy security are too often raised only on country level and do not fully take into account the mutual dependence of the member countries. The key to improving energy security is, firstly, a more collective approach, based on a well-functioning internal market and a better cooperation on local and European level, particularly in case of network development coordination and markets opening, and secondly, a more consistent external activity, related to resource import. At the same time, it is necessary to realize that ensuring energy security is an essential element of the fight against global warming.

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