

Núm. 25 / Curs 2013-2014

**FDI from European Union to Western Balkan Countries:  
is the economic development being intensified in the region?**

**Ruta Vesaite**

# **QUADERNS DE RECERCA (Bellaterra)**

## **MÀSTER UNIVERSITARI EN INTEGRACIÓ EUROPEA**

Núm. 25

**Curs 2013-2014**

© Facultat de Dret (Universitat Autònoma de Barcelona)

© Ruta Vesaite

**ISSN 2014-153X**

**Coordinadora de la col·lecció: Dra. Susana Beltran Garcia, Universitat Autònoma de Barcelona**

**([Susana.Beltran@uab.es](mailto:Susana.Beltran@uab.es))**

Aquesta col·lecció recull una selecció d'investigacions dutes a terme per estudiants del Màster Universitari en Integració Europea. Previ a la seva publicació, aquests treballs han estat tutoritzats per professors amb grau de doctor de diverses especialitats i han estat avaluats per un tribunal compost per tres docents distints del tutor.

Les llengües de treball son castellà, català, anglès i francès

Esta colección recoge una selección de investigaciones realizadas por estudiantes del Máster Universitario en Integración Europea. Previo a su publicación, los trabajos de investigación han sido tutorizados por profesores con grado doctor de diversas especialidades y han sido evaluados por un un tribunal compuesto por tres docentes distintos del tutor.

Les langues de travail son catalán, castellano, inglés y francés

This collection includes a selection of research by students of Master in European Integration. Prior to publication, the research papers have been tutored by teachers of with various specialties doctor degree and have been assessed by a commission composed of three different teachers tutor.

Working languages: Catalan, Spanish, English and French

Cette collection comprend une sélection de recherches par des étudiants de Master en intégration européenne. Avant la publication, les travaux de recherche ont été encadrés par des enseignants docteurs de diverses spécialités et après ont été évaluées par un tribunal composé de trois professeurs différents du tuteur.

Langues de travail: catalan, castillan, anglais et français

---

# FDI FROM EUROPEAN UNION TO WESTERN BALKAN COUNTRIES: IS THE ECONOMIC DEVELOPMENT BEING INTENSIFIED IN THE REGION?

---

Autora: Ruta Vesaite

Màster Universitari en Integració Europea,  
UAB, edició 2013-2014

Tutora: Rosella Nicolini

---

**ABSTRACT:** Foreign direct investment is important because of its advantages to the host country such as growth in competitiveness and intensified development. Its given advantages are significant to Western Balkan countries which are facing competition difficulties and lower growth than EU-27 countries. The research is looking at the dominating type of FDI from EU-27 countries to Western Balkan region at country and sector levels to form the implications about future growth of competitiveness and intensity of economic development. It is found that horizontal FDI dominates in Western Balkans, therefore, the growth of competitiveness and economic development are intensified in the region.

**RESUM:** La inversió estrangera directa és important a causa dels seus avantatges per al país d'acollida, per exemple augmentarà la competitivitat i s'intensifica el desenvolupament. Els avantatges són significatives als països dels Balcans occidentals que s'enfronten a les dificultats de la competència i el creixement més baix de la UE-27. El treball analitza el tipus dominant de la IED de la UE-27 a la regió dels Balcans Occidentals a escala nacional i sectorial per formar les implicacions sobre el futur creixement de la competitivitat i la intensitat del desenvolupament econòmic. Es troba que la IED horitzontal domina als Balcans occidentals, per tant, el creixement de la competitivitat i el desenvolupament econòmic es va intensificar a la regió.

**KEYWORDS:** Foreign Direct Investment, FDI, Western Balkans, European Union, competitiveness, Albania, Bosnia and Hercegovina, Croatia, The Former Yugoslav Republic of Macedonia, Montenegro, Serbia, Horizontal FDI, Vertical FDI, FDI determinants.

**PARAULES CLAU:** Inversió Estrangera Directa, Balcans Occidentals, Unió Europea, competitivitat, Albània, Bòsnia i Hercegovina, Croàcia, Ex República Iugoslava de Macedònia, Montenegro, Sèrbia, Horitzontal IED, IED vertical, determinants de la IED.



## ÍNDICE

1. INTRODUCTION .....	7
2. FDI AND WESTERN BALKAN COUNTRIES .....	8
2.1. FDI definition.....	9
2.2. FDI effects to the host country .....	10
2.3. Western Balkan region as a host countries for FDI .....	11
3. TYPES OF FDI .....	13
4. A SIMPLE THEORETICAL SURVEY TO SKETCH THE FDI DECISION MAKING .....	15
5. DETERMINANTS OF HORIZONTAL AND VERTICAL FDI .....	18
6. RESEARCH METHODOLOGY .....	21
7. EMPIRICAL COUNTRY AND SECTOR LEVEL ANALYSIS .....	24
7.1. Country level analysis .....	24
7.2. Sector level analysis .....	26
8. CONCLUSIONS .....	32
REFERENCES .....	34
A) Theory sources .....	34
B) Data sources .....	38

## 1. INTRODUCTION

Foreign direct investment recently got more attention among researchers because of a few reasons. Firstly, it caught the interest due to its continuous global growth. Comparing the years of 1990 with 2012, FDI inflows have risen almost 7 times (from 207 to 1351 respectively, in billions of dollars) and it is expected to be rising in the future (Unctad 2013). Secondly, it has important positive effects to the host countries. Because of the advantages that it brings to the recipients, it could be called as catalyst of internationalisation, competitiveness and economic development (OECD 2002; European Commission 2009). Competitiveness and economic development are the main features that have been asked for Copenhagen Criteria, which defines the conditions for countries wishing to join European Union.

Western Balkan region is not the exception. Western Balkan countries are potential future members of European Union with Croatia being admitted in 2013. Consequently, the rest of the countries, in order to join EU, have to follow the Copenhagen Criteria. Although Croatia is already a member, it is facing the same problems as others: low growth of competitiveness and slow economic development. The region's economic situation is much poorer in comparison with the rest of the members of European Union. Fortunately, FDI gives a possibility for Western Balkans to foster the growth of competitiveness and economic development in order to approach the standard of living of the developed members of EU.

FDI in Western Balkans is growing rapidly every year because of progress in EU accession and strengthening relations with European Union (Bevan, A.A. et al. 2004). However, the intensity of growing competitiveness and economic development depends on the type of FDI. Hence, it is significant to look what type of FDI is dominating in Western Balkans. By considering the dominating type of FDI in the region, the outlines of future growth of competitiveness in the given region might be foreseen. Also, the implications about economic development intensity, therefore, the approach to the standard of living of the countries of EU and the prospects of the rest of the countries to join EU might be formed.

Unfortunately, recently made studies could not identify which type of FDI is dominating in the aforesaid region. One of the reasons why the type of FDI was not identified is that economies like Western Balkans are particularly dynamic. It means rapidly changing conditions for investors that provoke engagement into FDI for changing motives (Estrin, S. et al. 2013). Another reason is lack of available data. However, after Hungary with Slovenia and Romania with Bulgaria joined European Union in 2004 and 2007 respectively, the region became geographically allocated next to the

members of European Union which made it of particular importance not only for the European Union, but also for researchers.

Curiously, but not many studies have discussed FDI from European Union to Western Balkans, despite of the fact that member countries of EU are the biggest investors in the given region and that competitiveness and economic development process are significant for the region in order to grow as fast as the EU member countries. As today the importance of the region is increasing because of its geographical proximity to EU and more statistical data is available, the present research is going to focus on examination of which type of FDI from European Union is dominating in the region.

In addition, the type of FDI might differ when looking at country and sector levels (Crozet, M. et al. 2004; Walsh, J. P. et al. 2010). In other words, the variables of FDI might be heteroscedastic at different levels. In order to cope with heteroscedasticity, the present research will include both country and sector level analysis to get more accurate results about the dominating type of FDI from European Union to the aforesaid region.

*The purpose of the research:* country and sector level analysis of determinants of Foreign Direct Investment from European Union to Western Balkan countries in order to discover the dominating type of FDI that the given region is experiencing and form the implications about the future growth of competitiveness and economic development in the region as well as the prospects of becoming members of EU for the rest of the countries.

Research consists of 8 paragraphs, which are the parts of theoretical, methodological and empirical analysis. In the theoretical part the definition and importance of FDI to the host countries are described. In addition, the composition of Western Balkans and the possible determinants that might attract FDI to the given region are presented. In the methodological part research methodology is explained and data collection with instruments of analysis is introduced. Empirical part is appointed for analysis of the relationship between the determinants of FDI from EU-27 to Western Balkan countries in country and sector levels. In the end of the present research the conclusions, derived from the research, are provided.

The lack of statistical data at the sector level is the main limitation of the present research. Therefore, in the sector level analysis, the data of five instead of six countries of Western Balkans is analysed.

## **2. FDI AND WESTERN BALKAN COUNTRIES**

Foreign direct investment is growing more rapidly than trade or world output (Mallampally, P. et al. 1999). Giving a more precise look of what exactly is foreign direct investment, of what parts it



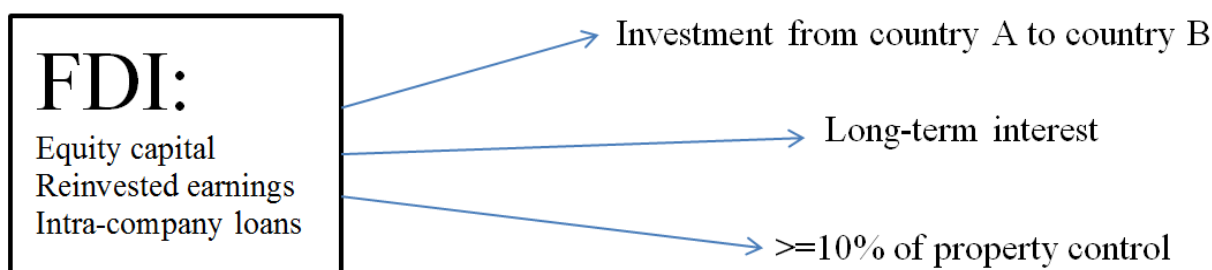
consists and what advantageous effects to host countries it could give, will help to understand its significance as well as the reasons of a comparatively rapid growth and its importance for Western Balkan countries.

## 2.1. FDI definition

Foreign direct investment is an ‘investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate)’ (Unctad 2007). In other words, it involves capital flows between home (parent, country A) and foreign owned enterprises (host, country B). The main elements of the given FDI definition are lasting interest, long-term relationship and control.

The objective in establishing the lasting interest in the foreign enterprise means that direct investor is motivated to build a long-term relationship with the direct investment enterprise or other property. The lasting interest is evidenced by controlling at least 10% of the property, which ensures a significant degree of influence (control) by the direct investor when it comes to management (OECD 2009).

According to Unctad (2007), FDI has three components: equity capital (shares of foreign enterprise), reinvested earnings (share of earnings not distributed as dividends or not remitted to the direct investor) and intra-company loans (short or long-term borrowing and lending of funds) (Unctad 2007). The aforesaid features of Foreign Direct Investment are shown in Image 1. However, the objective of the present research is to examine the types of FDI and not the components. Hence, in this research FDI will not be segmented by components but analysed as a whole.



**Image 1. Features of Foreign Direct Investment. Sources: Unctad (2007); OECD (2009)**

## 2.2. FDI effects to the host country

A number of researches enumerated positive effects of inbound FDI to host countries. Referencing Williams D. (1997) conducted research, inbound FDI impacts might be divided to direct and indirect (Williams, D. 1997). According to the theory, direct impact is more visible and measurable. Direct impact of FDI to the host economy could be seen in employment, output, balance of payment and similar. For example, according to Unctad (2013) data, the employment, provided by foreign affiliates, has risen from 21458 thousands to 71695 thousands during years 1990-2012 (Unctad 2013). In other words, direct impact is new job vacancies, created by foreign direct investors in the world, which have tripled during the years 1990-2012. In addition, foreign direct investment has a positive direct impact on the domestic firms' total factor productivity and increases the export (Markusen, J. R. et al. 1999).

While direct impact is measurable and could be reflected in statistics, indirect is a lot trickier to record. Dunning J. H. (1996) in the research about benefits of FDI gives plenty examples of indirect FDI impacts (Dunning, J. H. 1996). Most important of them are acceleration of learning processes and creation of knowledge spill-overs, changes in managerial culture, raise of quality standards, encouragement of formation of cross-border cooperative alliances and similar. It assists to formation of human capital, contributes to trade integration, enhances enterprise development and is crucial for increasing competitiveness (OECD 2002). Therefore, it is crucial in order to intensify the competitiveness and economic development.

The direct and indirect advantages that FDI brings to the host countries attract the attention of investors even more. This process leads to continuously increasing inflow of FDI in the host country, creating virtuous circle. This evidence is clearly reflected in numbers in Table 1. Referencing Table 1, it might be suspected that countries in Transition are facing aforesaid virtuous circle of FDI. The growth of FDI inflows is more intense than in developing or developed countries. Most importantly, as was mentioned before, this fast growth of FDI inflows accelerates spill-over processes which increase the competitiveness and intensifies economic development, the issues that transition economies, including Western Balkans, are trying to cope with recently.

**Table 1. Inward foreign direct investment stock by economies in 2000 and 2012. Source: Unctad (2013)**

Economy/Year	2000	2012	Growth per year in percent
Developing economies	1771481	7744523	36.42 %
<b>Transition economies</b>	<b>60828.81</b>	<b>847853.7</b>	<b>116.15%</b>
Developed economies	5679001	14220303	20.89%

### 2.3. Western Balkan region as a host countries for FDI

Balkan countries are labelled as transition economies (IMF 2000, November 3). The definition of transition economy implies that countries in transition are moving from centrally planned to market economies (Unctad Stat 2014). Balkan region consists of eleven countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Kosovo (which has disputed status), Former Yugoslav Republic of Macedonia, Montenegro, Romania, Serbia, Slovenia and Turkey. They share similar characteristics related to history, culture, reforms that were undertaken, market structure and others.

This research will be more precise and concentrated to Western Balkan countries and European Union due to its recently growing importance. Western Balkans is important for European Union because of region's and EU geographical proximity. After the European Union enlargement of Hungary with Slovenia and Romania with Bulgaria in 2004 and 2007 respectively, EU began to share the same borders with Western Balkans. Therefore, the economic relations as well as FDI between Western Balkans and European Union were fostered.

Western Balkan countries belong to Southeast Europe (SEE). According to European Union official reports, Western Balkan countries are Albania, Bosnia and Hercegovina, Croatia, The Former Yugoslav Republic of Macedonia, Kosovo under security resolution 1244 (which will not be included in the present research because of its complex status), Montenegro and Serbia (European Union External Action 2014). In other words, it is Albania and ex Former Republic of Yugoslavia's (which existed until 1992) countries, except Slovenia (Image 2).

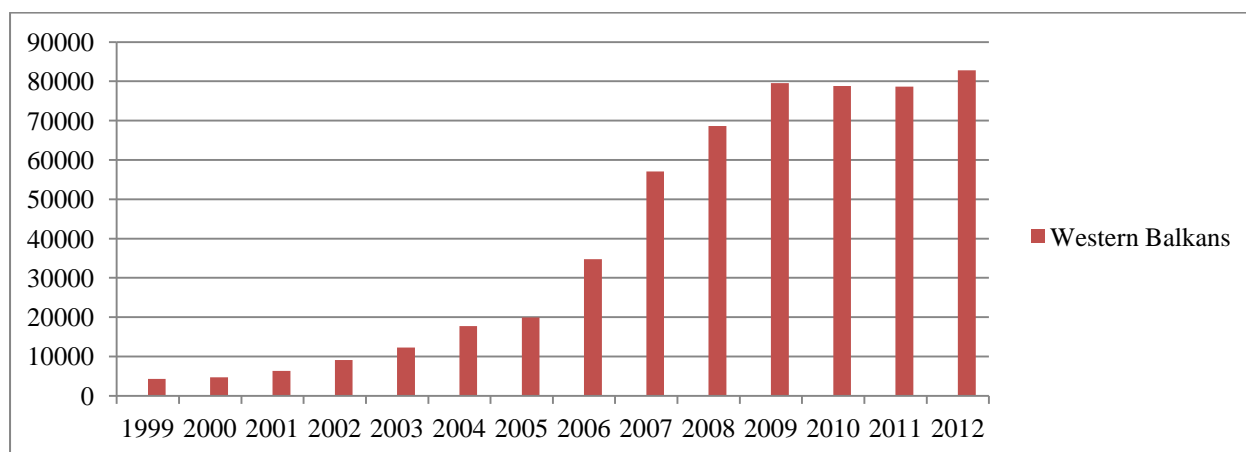


**Image 2. Western Balkan countries, coloured in blue. Source: own compilation**

It is important to mention that only in recent years Western Balkans can relax from conflicts and political turmoil which was torturing region for more than a decade. During the years, important

agreements, that fostered the movement to market economies, were signed between the region and European Union. All the given countries have Central European Free Trade Agreement (CEFTA) with European Union from 2003-2007. Each country, with the support of EU, is taking economic, political reforms ([European Union External Action 2014](#)) and participating in Stabilisation and Association Agreements (SAAs), which include massive financial assistance.

Agreements, aids of European Union and the proper efforts of Western Balkan region let these countries to be considered as future members of European Union, while Croatia could enjoy being one of the members from 2013 1<sup>st</sup> of July. The Former Yugoslav Republic of Macedonia, Montenegro (already negotiating) and Serbia are candidate countries while Albania with Bosnia and Herzegovina are potential candidates ([European Commission 2014, May 14](#)). In other words, when being involved in many programs and receiving aids in order to improve, the aforesaid region got closer to the standard of living of EU. Because of more stable situation in recent years, Western Balkan countries were able to enjoy annually growing inward FDI stock (Graph 1).



**Graph 1. Inward FDI stock, annual, 1999-2012 in US dollars in millions. Source: UnctadStat**

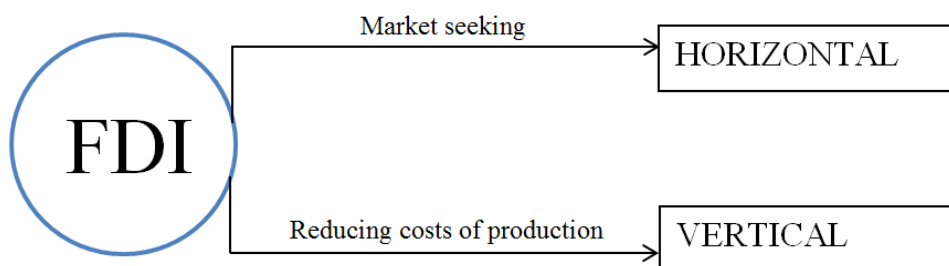
EU not only fosters trade and economy internationalisation through the before discussed agreements and aids in Western Balkan region, but also its member states are the largest aggregate provider of FDI to the region ([Western Balkans Investment Framework 2011](#)). Therefore, it is not surprising that further development of Western Balkans strongly depends on FDI from European Union ([Botric, V. 2010](#)).

On the one hand, the growth in Western Balkans during the past years was strong, but on the other hand, compared to the other fast growing new member states of the European Union such as Baltic or Central European countries, it is considerably lower ([European Commission 2009](#)). The comparatively slow growth in the region is a perfect proof of lack of competitiveness and slow economic development.

Fortunately, the lack of competitiveness might be overcome by FDI with the before discussed advantages that it brings. FDI is necessary for Croatia in order to grow and to align the EU member states when taking into consideration the economic development. In addition, growing FDI flow fosters the achievement of one of the main Copenhagen criteria, market economy and competitiveness, asked by European Union for the rest of Western Balkan countries in order to be accepted as new members of EU. However, it is important to look what type of FDI could be more advantageous for Western Balkan countries in order to increase their competitiveness and foster economic development in order to be more similar to the members of EU.

### 3. TYPES OF FDI

There are two types of FDI: vertical and horizontal. The types and motivations of engagement into each type of FDI are shown in Image 3. The reason of engagement into vertical type of FDI is basically because of the desire to reduce the cost of producing one good. Vertical type of foreign direct investment, often identified with international outsourcing/offshoring, occurs when multinational geographically fragments the production process, locating different operations in various countries, depending on factor intensities (Markusen, J. R. et al. 2002).



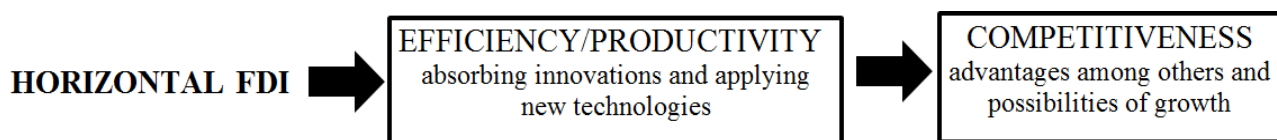
**Image 3. Types and motivation of engagement into each type of FDI. Source: own compilation**

Vertical type of FDI is cost oriented investment as companies can improve cost competitiveness of their end production by engaging into it. Differences in certain factors across the countries motivate multinationals to relocate some stages of production and engage into vertical FDI. It might allow reducing the final selling price. By engaging into vertical FDI, intra-firm production flows (export – import) between parent affiliate and foreign affiliate might be observed. It brings the question how best to serve the home market. This type of investment is more relative to the developing economies because of more usual existence of cost differences in the costs of production (Markusen, J. R et al. 1996).

Differently from vertical, firms engage into horizontal type of FDI in order to serve the foreign market. According to Zhang K. H. et al. (1999), horizontal Foreign Direct Investment type occurs

when multinational builds a plant in the foreign country to produce the same good or service (Zhang, K. H. et al. 1999). It is market oriented investment. It brings the question how best to serve the host market. It mostly occurs among the developed countries (Markusen, J. R. et al 1996).

Both types of FDI have positive effects on the host country and act as catalyst to the local industries (Markusen, J. R. et al. 1999). However, it has been proven that horizontal investment has stronger spill-over effects to the host market (Halpern, L. et al. 2007). Spill-over effects are interpreted as a transfer of knowledge and technology from foreign owned firm to local firms. In other words, domestic owned firms are absorbing knowledge and technology more effectively from horizontal foreign direct investments. The advantage of all this is gains in competitiveness (Image 4). As was said before, the competitiveness is highly needful for Western Balkans to foster the economic development and approach the standard of living of the countries of EU as well as to fulfil aforesaid Copenhagen Criteria.



**Image 4. Effects, caused by horizontal FDI. Source: own compilation**

Taking into consideration Image 4, it is not surprising why empirical evidence shows that countries that attract more horizontal FDI will have larger effect on growth than the countries that attract more vertical FDI (Beugelsdijk S. et al. 2008). In addition, Damijan J. P. et al. (2013) found that horizontal spill-overs have become increasingly important over the last decade (Damijan, J. P. et al. 2013). The results of research affirm the fact that the problem of increasing the competitiveness is very relevant.

Summing up all the given evidences, it is obvious that if horizontal FDI from European Union to Western Balkans is dominating, it means that the given region has promising prospects to foster competitiveness and economic development in order to approach the standard of living of the countries of EU with stronger economies and be able to compete with them. Therefore, the question of importance is if horizontal type of FDI from European Union to Western Balkan region is the one that dominates. Stating the fact that horizontal FDI is important for Western Balkan countries, it is significant to review how the firms come up with the decision in which type of FDI, vertical or horizontal, to engage.

#### 4. A SIMPLE THEORETICAL SURVEY TO SKETCH THE FDI DECISION MAKING

The decision of engagement into certain types of FDI will be explained by a simple theoretical survey referring to profit equations. The reason that the profit equations were chosen is that using the profit, companies might increase stock or market value, which is a desirable scenario for them. Making an assumption that there is one enterprise and it produces domestically in the member country of European Union, it could be seen that the enterprise incurs two types of costs. These costs are marginal production cost ( $C$ ) and firm-specific fixed cost ( $F$ ). Consequently, total costs of the production ( $TC$ ) in home country is

$$TC = F + CQ \quad (1)$$

where  $Q$  stands for quantity of produced goods. In the present research the monopolistic competitive framework, introduced in the model of Dixit A. K. et al. (1977), is used (Dixit, A. K. et al. 1977). In the given model enterprise can fix the price over the marginal costs. Therefore, the profit equation of the enterprise is

$$\pi = pQ - F - CQ \quad (2)$$

Where  $\pi$  is the profit,  $p$  is the fixed price. In other words, profit is equal to total earnings from goods minus total costs that were spent to produce the goods. The reduced version of equation (2) is

$$\pi = (p - C)Q - F \quad (3)$$

Therefore, the objective of the aforesaid enterprise is to try to lower its costs, it means lower  $F$  (firm-fixed costs) and lower  $C$  (the costs of one unit of product). Hence, by increasing  $Q$  (the quantity of produced goods), it might decrease the importance of  $F$  as it will affect the profit less.

Exporting or engagement into FDI (horizontal or vertical) might be one of the main solutions to make more profit than operating only at home. However, engagement into horizontal type of FDI is more complicated than into vertical. Market seeking decision has two solutions: exporting or investing by engaging into horizontal FDI. So which way should be chosen? The choice could be explained with equations.

The assumption is made that enterprise from European Union operates domestically and it exports to Western Balkan country. Therefore, the profit that the enterprise earns from exporting goods is:

$$\pi_{ij} = (p_j - C - t)Q_j \quad (4)$$



Where  $\pi_{ij}$  is the profit of exporting from country i (domestic country) to country j (foreign country),  $p_j$  is the price of the good that is being sold in the market j and  $t$  is the transport costs faced per unit. It is important to mention that in the given case the enterprise does not have to face additional fixed costs for the production of the good when being exported because it is already taken into the total cost of production of the principal plant. In view of the given case of exporting, the final profit of enterprise will be:

$$\pi_i^d = \pi_{ii} + \pi_{ij} = (p - C)Q_i - F + (p_j - C - t)Q_j$$

(5)

Where  $\pi_i^d$  is the profit of domestic firm built and functioning in country i (home country). In case the enterprise decides to engage into horizontal foreign direct investment, its profit will be computed as:

$$\pi_i^h = \pi_{ii} + \pi_{jj} = (p - C)Q_i - F + (p_j - C_j)Q_j - F_j$$

(6)

Where  $\pi_i^h$  stands for profit of the enterprise in country i that engaged into horizontal FDI in Western Balkan country j. The most important difference from the choice to export is that now the enterprise is facing double firm-fixed costs  $F$  in countries i and j, and  $C_j$  (marginal production cost in country j) now differs from that in the home country. In addition, the enterprise now does not need to face the transport costs, because FDI replaced the export.

As was said before, if the enterprise wants to increase its profit and it meets the demand in the home country, it will think about the possibility of serving the market abroad by exporting or engaging into horizontal FDI. Theoretically, the decision making by choosing one way or another is easy – the company will choose to engage into horizontal FDI if it brings bigger profit, if  $\pi_i^d < \pi_i^h$ .

Switching to decision of engagement into vertical foreign direct investment, this type of investment will be chosen if the enterprise wants to reduce its production costs, but sell the final product in the home market. Therefore, the profit equation of vertical foreign direct investment is:

$$\pi_i^v = (p - C_j - t - C_i)Q - F_{ij}$$

(7)



Where  $\pi_i^v$  is the profit from vertical FDI,  $p$  is the final price of good that is being sold in domestic market,  $C_j$  stands for cost of producing intermediate good in the host country and  $t$  is the transport cost paid to bring that good to the home country, while  $C_i$  stands for cost of producing final good at home. In addition,  $F_{ij}$  is the fixed cost for the enterprise at home (headquarters) and its fixed plant cost abroad in country  $j$ . In the engagement into vertical type of FDI decision, most important are the costs. In case of engaging into vertical foreign direct investment, firstly it is necessary that production costs abroad would be lower than producing at home,  $C_j < C$ . Secondly, considering all the costs, the engagement into vertical FDI will occur if

$$C_j + t + C_i + \frac{F_{ij}}{Q} < C + \frac{F_{ij}}{Q} \quad (8)$$

The formula (8) is showing the costs of production abroad and transport costs as the key issues for engagement into vertical FDI. Therefore, in case of engaging into vertical foreign direct investment, technically the total cost (production and transport) that is spent to produce final good at home while moving some processes of producing intermediate good abroad, has to be lower than producing everything at home, in other words,  $C_j + t + C_i < C$ .

Summing up all given examples, the enterprise's choice of how to serve the market (by exporting, by engaging into horizontal or vertical FDI) might strongly depend on the profit and faced total costs (summarize is shown in Table 2).

**Table 2. Decision of the enterprise how to serve the market and the necessary conditions. Source: own compilation**

DECISION	FORMULA	CONDITIONS OF DECISION
Export	$\pi_i^d = \pi_{ii} + \pi_{ij} = (p - C)Q_i - F + (p_j - C - t)Q_j$	$\pi_i^h < \pi_i^d$ .
<u>Horizontal FDI</u>	$\pi_i^h = \pi_{ii} + \pi_{jj} = (p - C)Q_i - F + (p_j - C_j)Q_j - F_j$	$\pi_i^d < \pi_i^h$
<u>Vertical FDI</u>	$\pi_i^v = (p - C_j - t - C_i)Q - F_{ij}$	$C_j + t + C_i < C$ .

As was discussed above, horizontal type of FDI intensifies the competitiveness and economic development more than vertical FDI. Hence, it is significant to look if the horizontal type of FDI from EU to Western Balkans is the one that dominates. The equations explained above will help to find if the horizontal type of investment dominates in Western Balkan region by relating each type of FDI with particular determinants.

## 5. DETERMINANTS OF HORIZONTAL AND VERTICAL FDI

The main determinants of engaging into vertical or horizontal FDI might be predicted from the equations provided in Table 2. Comparing the equation of export (5) with equation of horizontal FDI (6), it is clearly seen that transport costs play an important role in the decision making of how to serve the host market, in other words, in horizontal type of FDI engagement. Therefore, transport costs could be predicted to be as one of the determinants.

Looking at the equation (6)  $\pi_i^h = \pi_{ii} + \pi_{jj} = (p - C)Q_i - F + (p_j - C_j)Q_j - F_j$  of horizontal FDI, it could be seen that the enterprise that sets up a production facility in the host country has to cope with the fixed costs there. If the market size of the host country is too small, potential savings in transport costs (the aforesaid savings gained from the switch from exporting to horizontal FDI) will be insufficient to offset the fixed costs of setting up a production facility in the foreign market. Consequently, market size might be predicted to be a key determinant for horizontal FDI.

Lastly about horizontal FDI decision making determinants, the host country must offer at least the same conditions as parent company has at home in order to keep its level of profit, not mentioning the exceptions as dumping and others. Hence, not only market size and transport costs, but also factor endowments, such as labour productivity, should be included as a determinant.

Instead, vertical type of foreign direct investment decision is being made because of the possibility to reduce the production costs by exploiting factor-price differences across countries. It might be clearly seen from equation of vertical FDI (7) and conditions of the decision provided in equation (8) and in Table 2.

Looking at the conditions of the decision for vertical FDI in Table 2, it might be seen that it occurs if the cost savings from producing abroad are greater than the trade costs incurred. In other words, the trade costs faced to bring the goods back home has to pay off. Thus, the predictable determinants for vertical FDI are the relative difference in factor endowments  $C_j$  and trade costs  $t$ . That is, the production costs should be cheaper than at home while the level of trade costs should smooth the difference of producing in the host country.

The theory and empirical examinations not only confirm the aforesaid FDI determinants, but also suggest others, that were empirically proven. It is important to mention that there are plenty of determinants and their relevance is changing because of the location (Artige, L. et al. 2010). However, some determinants always reflect horizontal type of FDI while the others always reflect vertical type of FDI. Further determinants are chosen due to best reflect the differences between

vertical and horizontal FDI and because of lack of available data about Western Balkans, which is needful in order to execute the further analysis. These determinants are:

*A) Market size.* It is a demand factor. According to Protsenko A. (2004), market size is crucial for the decision in which type of FDI to engage (Protsenko, A. 2004). Artige L. et al. (2010) endorse the latter affirmation saying that if market size predominates as a determinant, it confirms the horizontal nature of FDI in the region (Artige, L. et al. 2010). The contribution claims that different sets of determinants are sufficient to attract FDI as long as favourable market size exists in the region (measuring by GDP per capita). Therefore, market size is a robust determinant to identify which type of FDI, vertical or horizontal, is the dominant one. Fukao K. et al. (2008) finds large market size as the most important determinant for horizontal FDI as well (Fukao, K. et al. 2008). In addition, Markusen J. R. et al. (1996) show that horizontal multinationals dominate when the countries are similar in size (Markusen, J. R. et al. 1996). Hence, market size has a positive relation with horizontal FDI.

*B) Wages.* It is a quantitative factor which is found to be significant by FDI researchers. According to Tüselmann H. (1999), labour cost considerations have been a prime factor in the location decisions of a large number of German companies, when taking into consideration vertical FDI (Tüselmann, H. 1999). Fukao K. et al. (2008) and Franco C. (2010) find low labour cost as the most important determinant for vertical FDI location decision as well (Fukao, K. et al. 2008; Franco, C. 2010). Markusen J. R. (1984) endorses the aforesaid vertical determinant while calling the difference of production costs savings and trade costs the ‘gain of offshoring’ (Markusen, J. R. 1984). According to the above mentioned facts, increasing wages will negatively affect vertical FDI.

*C) Skills.* It is qualitative variable which is found significant by Tüselmann H. (1999) (Tüselmann, H. 1999). Moosa I. A. et al. (2009) show that countries that have more educated people are attracting more FDI (Moosa, I. A. 2009). Fukao K. et al. (2008) find that it is significant for both horizontal and vertical FDI (Fukao, K. et al. 2008). However, level of labour skills has a positive impact for attracting horizontal FDI and might have both, negative or positive, impact for attracting vertical FDI. It is positive for horizontal FDI because companies are searching for similar factor endowments as they have in the home country, in other words, searching for similar skills (Dunning, J. H. 2002). Vertical FDI is oriented to cost related differences in factor endowments and might be efficiency seeking (more for knowledge intensive location of MNE activities, R&D and similar) or resource seeking ((Dunning, J. H. 2002). Therefore, the engagement into vertical FDI might happen for cheaper skilled labour force in the host country (efficiency seeking, positive

relationship with FDI and skills) or cheaper unskilled labour (resource seeking, negative relationship with FDI and skills because better education of labour force might increase the wages).

*D) Infrastructure.* According to Fukao K. et al. (2008), better infrastructure encourages vertical FDI (Fukao, K. et al. 2008). As was mentioned above, trade costs are the key issue for vertical foreign direct investors. The improvements in infrastructure are one of the effective ways to lower trade costs and to increase vertical type of FDI.

*E) Political prosperity.* Markusen J. R. (2002) and Addison T. et al. (2003) find it being significant for inward FDI (Markusen, J. R. 2002; Addison, T. et al. 2003). However, none of them related it with vertical or horizontal FDI. More precise with this determinant was the research of Tüselmann H. (1999), which found political prosperity to be significant for both, vertical and horizontal, types of FDI. (Tüselmann, H. 1999). However, higher political prosperity is found to be much more important by attracting market oriented (horizontal) FDI (Tüselmann, H. 1999).

*F) Country risk.* Unstable country brings uncertainty and the investors tend to rearrange the production allocation in other countries to reduce the risk (Weissleder, L. M. et al. 2008; Firoozi, F. 1997). Therefore, country risk has a negative effect on FDI. Tüselmann H. (1999) finds it as basic prerequisites for attracting German FDI (Tüselmann, H. 1999). It is important for both, horizontal and vertical, types of FDI (Tüselmann, H. 1999). However, for horizontal type of FDI the coefficient, therefore, the importance, is higher (Tüselmann, H. 1999).

*G) Trade costs.* Blonigen B. A. (2005) found it to be a significant determinant (Blonigen, B. A. (2005). However, he did not relate it to any of the types of FDI. Markusen J. R et al. (1996) show that horizontal multinationals dominate when trade costs are moderate to high (Markusen, J. R et al. (1996). That higher trade costs encourage horizontal FDI also has been claimed in Markusen J. R. (1984), Brainard S. L. (1997) and Carstensen K. et al. (2004) researches (Markusen, J. R. 1984; Brainard, S. L. 1997; Carstensen, K. et al. 2004). Fukao K. et al. (2008) find that high tariffs encourage horizontal FDI whereas low tariffs are favourable for attraction of vertical FDI (Fukao, K. et al. 2008). Therefore, high tariffs foster tariff jumping and locating companies in the foreign country where the market is, in other words, horizontal type of FDI engagement.

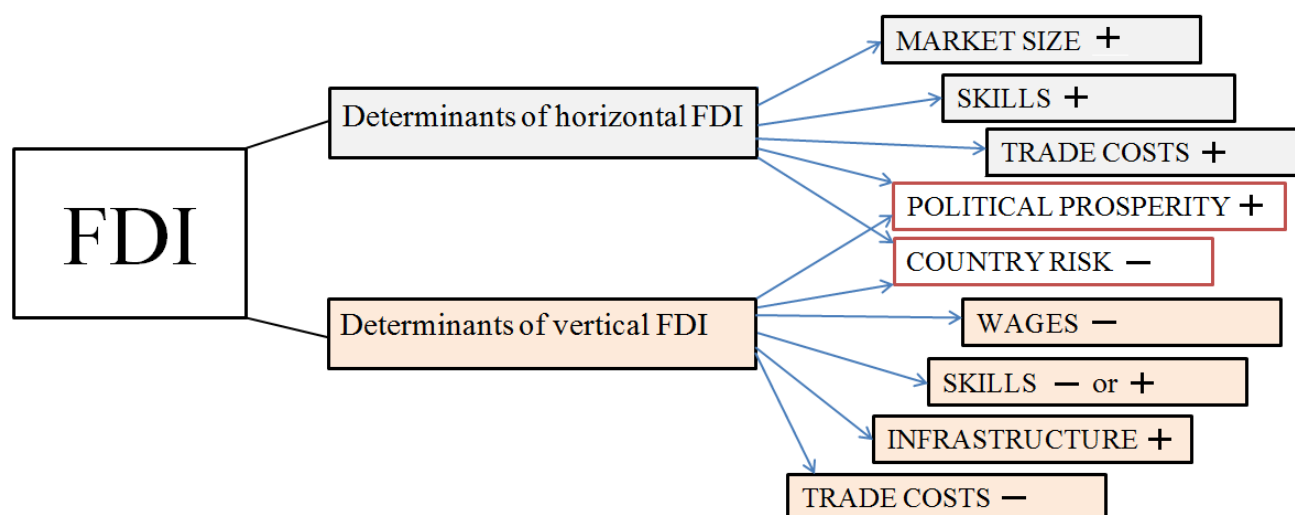
To sum up the present paragraph, in the analysis will be used seven determinants of FDI: Market size, Wages, Skills, Infrastructure, Political prosperity, Country risk and Trade costs. Every given determinant corresponds either to horizontal, vertical or both types of FDI. The model based on above made theoretical assumptions is provided in the next, Research methodology, part.

## 6. RESEARCH METHODOLOGY

The goal of the present research is to execute empirical analysis of theoretical relations between determinants of FDI from European Union to Western Balkan countries using both country and sector level data due to heteroscedasticity. The analysis will be done in order to answer the question if horizontal type of FDI from European Union to Western Balkan region is the one that dominates. It will help to form the implications about future growth of competitiveness and the intensity of economic development which is important for the region in order to approach the standard of living of the developed countries of EU. Further it will be introduced the expected relationships between FDI from European Union to Western Balkans, the data collection and the instruments that were used in order to determine the dominating type of FDI in the region.

### 6.1. Expectancies

The theory outlined above provided broad guidelines of FDI determinants corresponding to either horizontal or vertical type of FDI. Using all the affirmations from paragraph 4 about the vertical and horizontal FDI, these determinants are reflected in Image 5. Also, the positive (+) and negative (-) relationships are attached according to the theory with empirical evidences which were discussed in the previous part.



**Image 5. The determinants of horizontal and vertical FDI with the corresponding positive (+) and negative (-) relations. Source: own compilation**

In the present research nine variables are used: two that correspond FDI (FDI flow and FDI stock) and seven that correspond the location decision making of FDI (Market size, Wages, Skills, Infrastructure, Political prosperity, Country risk and Trade costs) (Image 5). The use of FDI flow

reflects direct reaction to changes in the country's environment while the use of FDI stock shows long term, permanent trends of FDI from European Union to Western Balkans.

In order to find out if horizontal type of FDI from European Union to Western Balkan region is the one that dominates, it is expected to get positive relations between FDI flow and Market size (most important determinant for horizontal type of FDI), Skills, Trade costs as well as positive relations between FDI stock and Market size, Skills and Trade costs (image 5). In other words, the positive relationships between FDI from EU and horizontal theoretical FDI determinants to Western Balkan countries are expected. Identical requirements stand when taking into consideration sector level data.

## **6.2. Data collection and instruments of analysis**

Both FDI flows and FDI stocks represent foreign direct investment from EU-27 countries. The EU-27 countries refer to all EU present members except Croatia. Croatia belongs to Western Balkan region, therefore in the present research it is set to be as one of FDI receivers from EU-27. Hence, the FDI receivers in the present research are six Western Balkan countries: Albania, Bosnia and Herzegovina, Croatia, F.Y.R. of Macedonia, Montenegro and Serbia. To sum up, in the present research will be examined the relationship between seven determinants of FDI flows from EU-27 countries towards six Western Balkan countries and the relationship between seven determinants of FDI stocks from EU-27 countries towards six Western Balkan countries.

Talking about data, FDI stock and FDI flow from home to host country and sector are measured by millions of euros. FDI flow and stock data for country level was collected from Eurostat webpage ([Eurostat 2013, March 3](#)) while for Bosnia and Herzegovina was taken from Central bank's webpage ([CBBH 2014, April 14](#)).

Talking about theoretical determinants, GDP is used as a proxy for Market size. GDP is estimated at current prices by millions of euros. The data was collected from Eurostat webpage ([Eurostat 2013, March 3](#)). Wages are reflected using Index of average monthly wages and salaries (2003=100), provided by Eurostat ([Eurostat 2013, March 3](#)). Tertiary education, for which data collected from national statistical departments ([INSTAT 2014](#); [Agencija za statistiku BiH 2014](#); [Republic of Macedonia State Statistical Office 2014](#); [Montstat 2014](#); [Croatian bureau of statistics 2014](#); [SORS 2014](#)), is a proxy for Skills while main telephone lines, measured by thousands and collected from Eurostat webpage ([Eurostat 2013, March 3](#)), is a proxy for Infrastructure.

Chan K. K. et al. (2004) define corruption as a political risk ([Chan, K. K. et al. 2004](#)). Therefore, the corruption in the given research is a proxy for Political prosperity. Data for Political prosperity was collected from Transparency International webpage ([Transparency International 2014](#)) and measured

as corruption perception index, from 1 (which refers to highly corrupt country) to 10 (which refer to very clean country). It indicates that less corrupted country will have higher index.

Referencing the conducted researches, the exchange rate fluctuations show Country risk (Weissleder, L. M. et al. 2008; Firoozi, F. 1997). Therefore, Country risk in the present research is reflected by exchange rate. It is measured as the exchange rate of euro to national currency. Consequently, if the exchange rate goes up, the currency is depreciating. The data is taken from Unctad webpage (UnctadStat 2014).

Lastly, tariffs are a form of trade costs between the home country and host countries (Fukao, K. et al. 2008). In other words, high tariffs increase trade costs. Therefore, tariffs are used as a proxy for trade costs. The data is taken from Worldbank (Worldbank 2013).

Talking about country level analysis, because of historical background of Western Balkan countries and lack of data, the estimation period differs in various countries. Estimated period is 2004-2012 for Albania, Bosnia and Herzegovina, Croatia; 2006-2012 for F.Y.R. of Macedonia; 2007-2012 for Montenegro and Serbia. Talking about sector level data, estimated period is 2004-2012 for Bosnia and Herzegovina, Croatia; 2006-2012 for F.Y.R. of Macedonia; 2007-2012 for Serbia and Albania. Unfortunately, no sector level data was available for Montenegro and very scarce sector level data was available for Bosnia and Herzegovina.

The relationship between FDI from EU-27 towards various sectors in Western Balkan region is reflected using FDI stock data. As was said before, FDI stock represents overall and permanent investment interest (in a moment of time) of the EU countries in Western Balkans, therefore it reflects the long term trend. Due to faced difficulties to obtain statistical data, 10 industries of Croatia, F.Y.R. of Macedonia, Serbia and Albania and only 4 industries of Bosnia and Herzegovina will be analysed.

The analysed industries represent three main sectors: Primary, Secondary and Tertiary. The examined industries are Agriculture, hunting and forestry (A), Mining and quarrying (C), Manufacturing (D), Electricity, gas and water supply (E), Construction (F), Wholesale and retail trade (G), Hotels and restaurants (H), Transport, storage and communication (I), Financial intermediation (J), Real estate, renting and business activities (K). Underlined industries are the ones that data for Bosnia and Herzegovina is available.

The sector level data of FDI stock for Albania, F.Y.R. of Macedonia and Serbia was collected from the webpages of National banks (Bank of Albania 2014, March 31; National Bank of the Republic of Macedonia 2014; NBS 2014). For Bosnia and Herzegovina, data was collected from National Bank



(Centralna Banka BiH 2014) and by contacting the responsible persons individually. For Croatia, data was collected from Unctad report (Unctad 2013).

In order to examine theoretical relations empirically, the statistical program IBM SPSS statistics, version 21, is used. The relationships are examined via correlation analysis. The lack of statistical data, especially at the sector level, is the main limitation of the present research. However, using the aforesaid program, the basic outlines of the determinants of FDI from EU-27 to Western Balkan countries, therefore, the dominating type of FDI, could be predicted.

## 7. EMPIRICAL COUNTRY AND SECTOR LEVEL ANALYSIS

As was claimed before, horizontal Foreign Direct Investment is important for Western Balkan countries due to its bigger knowledge spill-over effects and larger effect on competitiveness and growth in comparison with vertical FDI. All this could give the possibilities for Western Balkan region to intensify economic development and to approach the standard of living of EU-27. For this reason, current empirical analysis examines if horizontal type of FDI from European Union to Western Balkan region is the one that dominates. Correlation analysis, which is introduced below, was executed for country and sector levels due to heteroscedasticity.

### 7.1. Country level analysis

Considering in the previous section enumerated determinants, it could be seen that they are more representative for FDI stocks than flows. Half of the determinants could explain FDI flows from EU-27 to Western Balkans (0.488) (Table 3) while for FDI stock the determinants are very representative (0.917) (table 4). Therefore, the permanent interest of FDI by stock from EU-27 to Western Balkans is reflected better. In addition, high standard error indicates the problem of lack of data.

**Table 3. Model summary taking FDI flow as a dependent variable**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.699 <sup>a</sup>	.488	.394	786.46835

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE

**Table 4. Model summary taking FDI stock as a dependent variable**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958 <sup>a</sup>	.917	.902	1979.82181

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE



Talking about from correlation analysis obtained results (Table 5), despite of lack of data, analysis showed the significance of two vertical determinants, Infrastructure (0.389 for FDI flow and 0.747 for FDI stock, both  $p < 0.01$ ) and Trade costs (-0.339 for FDI stock;  $p < 0.05$ ). However, as Wages and Trade costs, the prime determinants for engagement into vertical FDI, are both found to be insignificant, it endorse the fact that dominating FDI type from EU-27 to Western Balkans is not the vertical.

By way of contrast, Table 5 clearly shows that horizontal FDI from EU-27 is the one that dominates in the Western Balkan region. Market size has the highest coefficient of all seven FDI determinants (0.603 for FDI flow; 0.942 for FDI stock;  $p < 0.01$ ). As was said before, if market size dominates as a determinant and has a positive relation with FDI (higher GDP will attract more FDI), it will confirm the horizontal nature of FDI in the region.

In addition, Skills is another important determinant for horizontal FDI. The positive and significant coefficient (0.365 for FDI flow;  $p < 0.05$  and 0.689 for FDI stock;  $p < 0.01$ ) perfectly supplements the aforesaid affirmation that horizontal FDI from EU-27 is the one that is dominating in Western Balkan region.

In comparison with FDI flow, the higher FDI stock correlation coefficient with Market size and Skills indicates that these variables are more important in order to accumulate FDI permanently than in one year period. The same fact could be also affirmed with the variable of Political prosperity, which is important for both, horizontal and vertical, types of FDI accumulation.

**Table 5. Country level correlation between FDI flow from EU-27 and FDI determinants; between FDI stock from EU-27 and FDI determinants.**

		FDIflow	FDIstock	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSEK	TRCOST
FDIflow	Pearson Correlation	1	.514**	.603**	.180	.365*	.389**	-.042	-.173	-.174
	Sig. (2-tailed)		.000	.000	.233	.013	.008	.784	.251	.246
	N	46	46	46	46	46	46	46	46	46
FDIstock	Pearson Correlation	.514**	1	.942**	.119	.689**	.747**	.416**	-.151	-.339*
	Sig. (2-tailed)	.000		.000	.432	.000	.000	.004	.315	.021
	N	46	46	46	46	46	46	46	46	46
MSIZE	Pearson Correlation	.603**	.942**	1	.156	.738**	.797**	.298*	-.195	-.305*
	Sig. (2-tailed)	.000	.000		.302	.000	.000	.044	.194	.039
	N	46	46	46	46	46	46	46	46	46
WAGE	Pearson Correlation	.180	.119	.156	1	.173	.321*	-.025	.097	.267
	Sig. (2-tailed)	.233	.432	.302		.250	.030	.870	.520	.073
	N	46	46	46	46	46	46	46	46	46
SKILLS	Pearson Correlation	.365*	.689**	.738**	.173	1	.769**	.164	.278	-.237
	Sig. (2-tailed)	.013	.000	.000	.250		.000	.277	.061	.113
	N	46	46	46	46	46	46	46	46	46
INFR	Pearson Correlation	.389**	.747**	.797**	.321*	.769**	1	.101	-.023	.005
	Sig. (2-tailed)	.008	.000	.000	.030	.000		.506	.877	.975
	N	46	46	46	46	46	46	46	46	46
POLPRS	Pearson Correlation	-.042	.416**	.298*	-.025	.164	.101	1	-.148	-.178
	Sig. (2-tailed)	.784	.004	.044	.870	.277	.506		.326	.237
	N	46	46	46	46	46	46	46	46	46
COURSEK	Pearson Correlation	-.173	-.151	-.195	.097	.278	-.023	-.148	1	.066
	Sig. (2-tailed)	.251	.315	.194	.520	.061	.877	.326		.663
	N	46	46	46	46	46	46	46	46	46
TRCOST	Pearson Correlation	-.174	-.339*	-.305*	.267	-.237	.005	-.178	.066	1
	Sig. (2-tailed)	.246	.021	.039	.073	.113	.975	.237	.663	
	N	46	46	46	46	46	46	46	46	46

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

## 7.2. Sector level analysis

Different sectors have different potential to absorb the knowledge spill-overs which have been brought by FDI. Referencing UNCTAD (2001) report, in which investment linkages between foreign and local producers are discussed, Primary sector (Agriculture, Mining and Quarrying) has limited scope for linkages between foreign affiliates and local suppliers. The same could be said about Tertiary (Services) sector (UNCTAD 2001). Conversely, Secondary (Manufacturing) sector has a broad variation of linkage intensive activities (UNCTAD 2001). Giving all this information, it might be predicted that horizontal foreign direct investment in Manufacturing sector would foster the growth in competitiveness and intensify the economic development more than in other sectors as FDI given advantages would be absorbed more effectively.

Talking about the results obtained from correlation analysis, it is important to notice that theoretical determinants of FDI from European Union to Western Balkan countries, when taking into

consideration sector level data, were found to be very representative (Tables 5-14). The measure of R-square in all cases showed that the determinants represented two thirds or more of the FDI stock variation to Western Balkans.

Taking into consideration sectors, Agriculture, hunting and forestry and Mining and quarrying belong to primary sector. Analysing Agriculture, hunting and forestry industry, Market size (0.700;  $p < 0.01$ ), Political Prosperity (0.589;  $p < 0.01$ ) and Country Risk (-0.816;  $p < 0.01$ ) were found to be highly significant (Table 5). The results show that higher GDP and higher anticorruption level will attract more FDI from EU-27 to Western Balkans while appreciation of the national currency will deter the foreign investors. Most importantly, the significance of Market size highly confirms that the dominating type of investment in the present industry is horizontal.

**Table 6. Correlation and model summary results for Agriculture, hunting and forestry**

		AgricultureFDI	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSK	TRCOST
AgricultureFDI	Pearson Correlation	1	.700**	-.004	.098	.213	.589**	-.816**	-.263
	Sig. (2-tailed)		.000	.984	.627	.287	.001	.000	.185
	N	27	27	27	27	27	27	27	27

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911 <sup>a</sup>	.830	.768	18.05373

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE

On the contrary, when taking into account Mining and quarrying industry, only one significant variable, Trade costs which are represented by tariffs, is found significant (-0.613;  $p < 0.01$ ) (Table 6). Its negative correlation with FDI from EU-27 implies that when Trade costs are growing, it deter the FDI stock in the given industry of Western Balkans. According to Image 5, negative correlation with Trade costs shows vertical type of FDI. However, the correlation with Wages (another prime determinant for vertical FDI) is not significant.

**Table 7. Correlation and model summary results for Mining and quarrying**

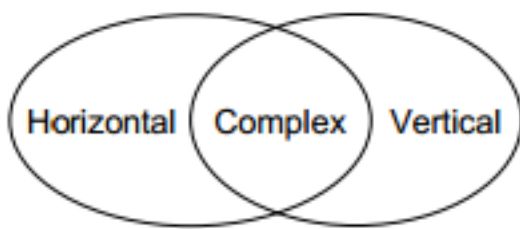
		Mining	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSK	TRCOST
Mining	Pearson Correlation	1	.349	-.196	.323	-.094	.212	-.249	-.613**
	Sig. (2-tailed)		.074	.326	.100	.642	.289	.211	.001
	N	27	27	27	27	27	27	27	27

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.878 <sup>a</sup>	.771	.691	112.13210

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE

To sum up, the results of Primary sector show ambiguous correlations. Therefore, it is hard to form the implications about the dominating type of FDI because of a few reasons. First reason is the transition period of the industries in Western Balkans, the continuous development and changing conditions for investors which provoke the existence of both types of FDI among industries. Alfaro L. et al. (2009) called it complex FDI (Image 6) (Alfaro, L. et al. 2009). Second reason why it cannot be identified is the lack of statistical data, which is reflected by high standard errors of the estimate (Table 5 and Table 6).



**Image 6. Complex FDI. Source: Alfaro L. et al. (2009)**

Switching to Secondary sector, Manufacturing, the results are favourable for horizontal type of FDI. The results of executed analysis show that significant determinants are Market size (0.803;  $p < 0.01$ ), Political prosperity (0.591,  $p < 0.01$ ), Country risk (-0.378;  $p < 0.05$ ) and Trade costs (-0.515;  $p < 0.01$ ) (Image 7). On the one hand, Trade costs shows negative correlation which belongs to vertical FDI, but on the other hand, if market size predominates as a determinant, it confirms the horizontal nature of FDI in the region (Artige, L. et al. 2010). Consequently, it can be stated that dominating type of FDI from EU-27 in Secondary sector of Western Balkan region is horizontal. In addition, the significance of Political Prosperity and Country risk show the importance of these two determinants for investors from European Union.

**Table 8. Correlation and model summary results for Manufacturing**

		Manufact	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSK	TRCOST
Manufact	Pearson Correlation	1	.803**	-.102	.265	.271	.591**	-.378*	-.515**
	Sig. (2-tailed)		.000	.555	.118	.109	.000	.023	.001
	N	36	36	36	36	36	36	36	36

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.975 <sup>a</sup>	.951	.939	510.79828

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE

Lastly, taking into consideration the Tertiary sector, seven industries are analysed: Electricity, gas and water supply, Construction, Wholesale and retail trade, Hotels and restaurants, Transport, storage and communication, Financial intermediation, Real estate, renting and business activities.

Starting with Electricity, gas and water supply industry, negative correlation might be seen between FDI stock and Skills (-0.509;  $p < 0.01$ ), Infrastructure (-0.542;  $p < 0.01$ ) and positive correlation with Political Prosperity (0.542;  $p < 0.01$ ) (Table 8). Due to the non-existent domination of neither prime determinants of horizontal (Market size) nor of vertical FDI (Wages and Trade costs), the dominating type of FDI could not be determined.

**Table 9. Correlation and model summary results for Electricity, gas and water supply**

		Electricit	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSEK	TRCOST
Electricit	Pearson Correlation	1	-.170	-.276	-.509**	-.542**	.476*	-.380	-.267
	Sig. (2-tailed)		.398	.164	.007	.003	.012	.051	.177
	N	27	27	27	27	27	27	27	27

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.882 <sup>a</sup>	.778	.697	49.05122

a. Predictors: (Constant), TRCOST, INFR, COURSEK, POLPRS, WAGE, SKILLS, MSIZE

Switching to Construction industry, the dominating horizontal type of FDI is clearly seen (Table 9). Market size determinant is positive and significant (0.538;  $p < 0.01$ )

**Table 10. Correlation and model summary results for Construction**

		Construct	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSEK	TRCOST
Construct	Pearson Correlation	1	.538**	-.161	.017	.039	.645**	-.586**	-.250
	Sig. (2-tailed)		.004	.423	.933	.848	.000	.001	.208
	N	27	27	27	27	27	27	27	27

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898 <sup>a</sup>	.807	.736	59.59408

a. Predictors: (Constant), TRCOST, INFR, COURSEK, POLPRS, WAGE, SKILLS, MSIZE

In case of Wholesale and retail trade, Hotels and restaurants and Transport, storage and communication industries, the dominating horizontal type of FDI could be seen as well (Table 10-12 respectively). The determinant of Market size is highly significant and shows similarly strong correlations in all three industries (0.785,  $p < 0.01$  for Wholesale and retail trade; 0.752,  $p < 0.01$  for Hotels and restaurants; 0.761,  $p < 0.01$  for Transport, storage and communication).

**Table 11. Correlation and model summary results for Wholesale and retail trade**

		Wholesale	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSEK	TRCOST
Wholesale	Pearson Correlation	1	.785**	-.073	.296	.292	.591**	-.357*	-.459**
	Sig. (2-tailed)		.000	.671	.080	.084	.000	.033	.005
	N	36	36	36	36	36	36	36	36

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 <sup>a</sup>	.857	.822	498.61262

a. Predictors: (Constant), TRCOST, INFR, COURSEK, POLPRS, WAGE, SKILLS, MSIZE

**Table 12. Correlation and model summary results for Hotels and restaurants**

		Hotels	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSEK	TRCOST
Hotels	Pearson Correlation	1	.752**	-.150	.199	.189	.381*	-.798**	-.447*
	Sig. (2-tailed)		.000	.455	.320	.345	.050	.000	.020
	N	27	27	27	27	27	27	27	27

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.972 <sup>a</sup>	.944	.923	82.41774

a. Predictors: (Constant), TRCOST, INFR, COURSEK, POLPRS, WAGE, SKILLS, MSIZE

**Table 13. Correlation and model summary results for Transport, storage and communication**

		Transport	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSEK	TRCOST
Transport	Pearson Correlation	1	.761**	-.102	.249	.229	.454**	-.347*	-.442**
	Sig. (2-tailed)		.000	.554	.143	.178	.005	.038	.007
	N	36	36	36	36	36	36	36	36

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.948 <sup>a</sup>	.898	.873	286.94193

a. Predictors: (Constant), TRCOST, INFR, COURSEK, POLPRS, WAGE, SKILLS, MSIZE

Strong correlation between FDI stock and Market size could be also observed in Financial intermediation industry (0.767;  $p < 0.01$ ) (Table 13), and even stronger correlation might be seen in Real estate, renting and business activities (0.816;  $p < 0.01$ ) (Table 14). Consequently, both positive significant correlations with Market size imply that horizontal type of FDI is dominating in these two industries as well.

**Table 14. Correlation and model summary results for Financial Intermediation**

		Financial	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSK	TRCOST
Financial	Pearson Correlation	1	.767**	-.063	.265	.256	.528**	-.377*	-.453**
	Sig. (2-tailed)		.000	.713	.118	.132	.001	.023	.005
	N	36	36	36	36	36	36	36	36

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.924 <sup>a</sup>	.853	.817	1610.22796

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE

**Table 15. Correlation and model summary results for Real estate, renting and business activities**

		RealEst	MSIZE	WAGE	SKILLS	INFR	POLPRS	COURSK	TRCOST
RealEst	Pearson Correlation	1	.816**	-.047	.286	.298	.562**	-.756**	-.348
	Sig. (2-tailed)		.000	.818	.148	.131	.002	.000	.075
	N	27	27	27	27	27	27	27	27

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958 <sup>a</sup>	.918	.887	399.48690

a. Predictors: (Constant), TRCOST, INFR, COURSK, POLPRS, WAGE, SKILLS, MSIZE

All FDI from EU-27 to Tertiary sector industries in the region significantly correlates with Political Prosperity and almost all Tertiary sector industries significantly correlates with Country risk. Hence, Political Prosperity and Country risk are highly important for European Investors into Tertiary sector. Most importantly, as it could be seen from the obtained results, all the industries from Tertiary sector, except Electricity, gas and water supply, distinguish by significant and positive correlation with Market size. Consequently, giving the evidences favourable for Market size that are reflected in Tables 5-14, it can be claimed that dominating type of FDI from EU-27 to Tertiary sector in Western Balkans region is the horizontal one.

Summing up country and sector level results all together (Image 7), it might be noticed, that FDI determinants differ between country and industry levels. However, the constant insignificance of Wages and the frequent insignificance of other determinants that belong to vertical type of FDI might be observed. Meanwhile, Market size could be distinguished as a clearly dominating determinant in a country, Secondary and Tertiary levels. In addition, Political prosperity and Country risk take high importance in order to engage into FDI in almost all industries, therefore, should be also taken into consideration. Conclusively, the results give an implication that the dominating type of FDI from EU-27 to Western Balkan region (country level), Secondary and Tertiary sectors of Western Balkans (sector levels) is horizontal.

**Table 16. Summarize of obtained results of FDI by country and sector level, where (+) and (-) mark significant positive and negative correlations respectively. Source: own compilation**

	MARKET SIZE	WAGES	SKILLS	INFRASTRUCTURE	POLITICAL PROSPERITY	COUNTRY RISK	TRADE COSTS
COUNTRY LEVEL: FDI FLOW	+		+	+			
COUNTRY LEVEL: FDI STOCK	+		+	+	+		-
AGRICULTURE, HUNTING AND FORESTRY (A)	+				+	-	
MINING AND QUARRYING (C)							-
MANUFACTURING (D)	+				+	-	-
ELECTRICITY, GAS AND WATER SUPPLY (E)			-	-	+		
CONSTRUCTION (F)	+				+	-	
WHOLESALE AND RETAIL TRADE (G)	+				+	-	-
HOTELS AND RESTAURANTS (H)	+				+	-	-
TRANSPORT, STORAGE AND COMMUNICATION (I)	+				+	-	-
FINANCIAL INTERMEDIATION (J)	+				+	-	-
REAL ESTATE, RENTING AND BUSINESS ACTIVITIES (K)	+				+	-	

## 8. CONCLUSIONS

The purpose of the research was to propose a country and sector level analysis of determinants of Foreign Direct Investment from European Union to Western Balkan countries in order to assess which type of FDI is the dominating one in the given region. This type of research question is relevant because of its implications for the increase of competitiveness and the intensification of economic development in the region as well as implications about the membership of EU for the rest of the countries. After the empirical analysis, it is clearly seen that horizontal type of FDI is dominating in the Western Balkan countries as well as in the secondary and tertiary sectors.

From the obtained results about the dominating horizontal type of FDI in the region, some implications might be formed. Firstly, as it was said in the beginning, previous studies could hardly identify which type of FDI is dominating in the Western Balkans because of particularly dynamic region. Despite of managing rather incomplete data, the present research was able to identify that the horizontal type of FDI is the dominant one. It implies that the analysed countries became more stable as the identification of the dominating type of FDI became possible. Though, the investors are still



considering Political prosperity and Country risk when engaging into FDI in all sectors. Therefore, this fact should be taken into account in order to improve the investment climate in the region.

Secondly, taking into consideration that horizontal FDI is usually dominating in the developed countries, it might be stated that European Union and Western Balkan region successfully collaborate towards the integration of aforesaid region. Geographical proximity, agreements and financial assistance from European Union to Western Balkan countries helped the region to move forward with economic and political reforms. It might be stated that the efforts of EU were justified and today Western Balkan region stands closer in line with EU, the developed countries.

Lastly, giving the fact that horizontal type of FDI in the region is the one that dominates, it might be expected that Western Balkan countries are now absorbing knowledge and technology more effectively than a few years ago, when, according to previous researches, it was attracting complex (vertical and horizontal) type of FDI. Therefore, it creates the opportunities to increase the competitiveness faster along with intensifying the economic development and approaching the standard of living of EU-27 countries. In addition, due to dominating horizontal type of FDI into secondary sector, more spill-overs to domestic firms are expected. It might additionally foster the intensification of aforesaid processes of competition and economic development.

To sum up, the dominating horizontal type of FDI in Western Balkans shows that the region is more stable, prosperous and getting alike with developed countries of EU. Although the region is still facing difficulties in competition with the EU members, the European Union is helping to cope with them by financial support and agreements. In addition, dominating horizontal type of FDI in Albania, Bosnia and Herzegovina, F.Y.R. Macedonia, Montenegro and Serbia implies that these countries are now sufficiently mature in a political, economic and societal sense. Therefore, they might expect to become members of European Union sooner while Croatia might expect the increasing ability to grow further and develop faster than before. Therefore, it is only a question of time how long Western Balkan region will need to achieve their objective to improve poorer economic situation in comparison with EU-27 countries, as the correct instruments, with the help of European Union, have been already taken. And it is a fact, that horizontal type of FDI intensified the economic development and is helping the region to move closer towards EU-27 standard of living.

## REFERENCES

### A) Theory sources

1. Addison, T., & Heshmati, A. (2003). The new global determinants of FDI flows to developing countries: The importance of ICT and democratization. *Discussion Paper No. 2003/45. World Institute for Development Economics Research, United Nations University, Helsinki*
2. Alfaro, L., & Charlton, A. (2009). Intra-industry Foreign Direct Investment. *American Economic Review*, 99(5), 2096-2119.
3. Artige, L., & Nicolini, R. (2010). Market Potential, Productivity and Foreign Direct Investment: Some Evidence from Three Case Studies. *European Planning Studies*, 18(2), 147 — 168.
4. Beugelsdijk, S., Smeets, R., & Zwinkels, R. (2008). The impact of horizontal and vertical FDI on host's country economic growth. *International Business Review*, 17(4), 452-472.
5. Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct investment into European transition economies. *Journal of Comparative Economics*, 32(4), 775-787.
6. Blonigen, B. A. (2005). A Review of the Empirical Literature on FDI Determinants. *Atlantic Economic Journal*, 33(4), 383-403.
7. Botric, V. (2010). Foreign direct investment in the Western Balkans: privatization, institutional change and banking sector dominance. *Economic Annals*, 55(187), 7-30.
8. Brainard, S. L. (1997). An Empirical Assessment of the Proximity-Concentration Trade-off between Multinational Sales and Trade. *American Economic Review*, 87(4), 520-544.
9. Carstensen, K., & Toubal, F. (2004). Foreign direct investment in Central and Eastern European countries: a dynamic panel analysis. *Journal of Comparative Economics*, 32(1), 3-22.

10. Chan, K. K., & Gemayel, E. R. (2004). *Risk instability and the pattern of foreign direct investment in the Middle East and North Africa region* (04/139). Washington D.C.: International Monetary Fund, Middle East and Central Asia Dept.
11. Crozet, M., Mayer, T., & Mucchielli, J. (2004). How do firms agglomerate? A study of FDI in France. *Regional Science and Urban Economics*, 34(1), 27 – 54.
12. Damijan, J. P., Rojec, M., Majcen, B., & Knell, M. (2013). Impact of Firm Heterogeneity on Direct and Spillover Effects of FDI: Micro Evidence from Ten Transition Countries. *Journal of Comparative Economics*, 41(3), 895–922.
13. Dixit, A. K., & Stiglitz, J. E. (1977). Monopolistic Competition and Optimum Product Diversity. *American Economic Review*, 67(3), 297–308.
14. Dunning, J. H. (1996). *Re-evaluating the benefits of foreign direct investment*.  
Companies Without Borders : Transnational Corporations in the 1990s / Unctad, Division on Transnational Corporations and Investment.
15. Dunning, J. H. (2002). Location and the multinational enterprise: a neglected factor?  
In *Global capitalism, FDI and competitiveness* (2nd ed., pp. 146-169). Cheltenham, United Kingdom: Edward Elgar.
16. Estrin, S., & Uvalic, M. (2013). Foreign direct investment into transition economies: Are the Balkans different? *LEQS Paper No. 64, European Institute, LSE*
17. European Commission (2012, September 9). *Accession criteria*. Retrieved June 2, 2014, from [ec.europa.eu/enlargement/policy/glossary/terms/accession-criteria\\_en.htm](http://ec.europa.eu/enlargement/policy/glossary/terms/accession-criteria_en.htm)
18. European Commission (2014, May 14). *Enlargement*. Retrieved May 20, 2014, from [ec.europa.eu/enlargement/countries/check-current-status/index\\_en.htm](http://ec.europa.eu/enlargement/countries/check-current-status/index_en.htm)
19. European Commission. Directorate-General for Enterprise and Industry (2012). *European competitiveness report 2012*. Luxembourg: Publications Office.

20. European Commission. Directorate-General for Economic and Financial Affairs (2009). The Western Balkans in transition. *Brussels, Belgium: European Commission, Directorate-General for Economic and Financial Affairs, Occasional Papers No. 46*, p. 1-78.
21. European Union External Action (2014). *EU relations with the Western Balkans*. Retrieved April 22, 2014, from [eeas.europa.eu/western\\_balkans/index\\_en.htm](http://eeas.europa.eu/western_balkans/index_en.htm)
22. Firoozi, F. (1997). Multinationals FDI and uncertainty: an exposition. *Journal of Multinational Financial Management*, 7(3), 265–273.
23. Franco, C. (2010). Horizontal and Vertical FDI: A Comparative Analysis of Technological Determinants. *Quaderni DSE Working Paper No. 713*, p. 1-26.
24. Fukao, K., & Wei, Y. (2008). How do the location determinants of vertical FDI and horizontal FDI differ? *Institute of Economic Research Hitotsubashi University Discussion Paper Series No. 233*, p. 3-9.
25. Halpern, L., & Muraközy, B. (2007). Does distance matter in spillover? *Economics of Transition*, 15, 781-805.
26. IMF (2000, November 3). *Transition Economies: An IMF Perspective on Progress and Prospects. An IMF Issues Brief*. Retrieved April 22, 2014, from <http://www.imf.org/external/np/exr/ib/2000/110300.htm>
27. Mallampally, P., & Sauvart, K. P. (1999). Foreign Direct Investment in Developing Countries. *Finance & Development, A quarterly magazine of the IMF*, 36(1).
28. Markusen, J. R. (1984). Multinationals, multi-plant economies, and the gains from trade. *Journal of International Economics*, 16(3-4), 205-226.
29. Markusen, J. R., & Maskus, K. E. (2002). Discriminating among Alternative Theories of the Multinational Enterprise. *Review of International Economics*, 10(4), 694–707.
30. Markusen, J. R., & Venables, A. J. (1999). Foreign direct investment as a catalyst for industrial development. *European Economic Review*, 43(2), 335-356.

31. Markusen, J. R., Venables, A. J., Konan, D. E., & Zhang, K. H. (1996). A Unified Treatment of Horizontal Direct Investment, Vertical Direct Investment, and the Pattern of Trade in Goods and Services. *NBER Working paper No. 5696*.
32. Moosa, I. A., & Cardak, B. A. (2009). The determinants of foreign direct investment: An extreme bounds analysis. *Applied Economics Letters*, 16(15), 1559-1563.
33. Unctad Stat (2014). *Methodology and Classification*. Retrieved April 5, 2014, from <http://unctadstat.unctad.org/UnctadStatMetadata/Classifications/Methodology&Classifications.html>
34. United Nations Conference on Trade and Development (2001). *World investment report, 2001: Promoting linkages*. New York: United Nations.
35. United Nations Conference on Trade and Development (2007). *Transnational corporations, extractive industries and development*. New York: United Nations
36. United Nations Conference on Trade and Development, issuing body (2013). *World Investment report 2013. Global value chains: Investment and trade for development*. Geneva: United Nations
37. Organisation for Economic Co-operation and Development (2002). *Foreign direct investment for development: Maximising benefits, minimising costs*. Paris: OECD.
38. Organisation for Economic Co-operation and Development (2009). *OECD Benchmark Definition of Foreign Direct Investment 2008: Fourth Edition*. (Quatrième édition.) Paris: OECD Publishing.
39. Protsenko, A. (2004). *Vertical and Horizontal Foreign Direct Investments in Transition Countries*, Ph.D Thesis, University of Munich, Munich.
40. Tüselmann, H. (1999). German direct foreign investment in Eastern and Central Europe: relocation of German industry? *European Business Review*, 99(6), 359 - 367.

41. Walsh, J. P., & Jiangyan, Y. (2010). *Determinants of foreign direct investment: A sectoral and institutional approach* (10/187). Washington, D.C.: International Monetary Fund.
42. Weissleder, L. M., & Heckelei, T. (2008). Analysing major determinants of European FDI into the Mediterranean countries. *12<sup>th</sup> Congress of the European Association of Agricultural Economists, Bonn, Germany*.
43. Western Balkans Investment Framework (2011, November 15). *Western Balkans Investment Framework*. Retrieved April 30, 2014, from <http://wbif.eu/news/56>
44. Williams, D. (1997). Strategies of multinational enterprises and the development of the Central and Eastern European economies. *European Business Review*, 97(3), 134 - 138.
45. Zhang, K. H., & Markusen, J. R. (1999). Vertical multinationals and host-country characteristics. *Journal of Development Economics*, 59(2), 233-252.

## **B) Data sources**

1. Agencija za statistiku BiH (2014). *Demography and social statistics*. Retrieved April 20, 2014, from [http://www.bhas.ba/index.php?option=com\\_publicacija&view=publicacija\\_pregled&ids=1&id=21&n=Education](http://www.bhas.ba/index.php?option=com_publicacija&view=publicacija_pregled&ids=1&id=21&n=Education)
2. Bank of Albania (2014, March 31). *International Investment Position*. Retrieved April 20, 2014, from [http://www.bankofalbania.org/web/Time\\_series\\_22\\_2.php?evn=agregate\\_detaje&evb=agregate&cregtab\\_id=688&periudha\\_id=5](http://www.bankofalbania.org/web/Time_series_22_2.php?evn=agregate_detaje&evb=agregate&cregtab_id=688&periudha_id=5)
3. CBBH (2014, April 14). *BH External Sector*. Retrieved May 20, 2014, from <http://www.cbbh.ba/index.php?id=34&lang=en>
4. Centralna Banka BiH (2014). *Stanha direktnih investicija u BiH*. Retrieved April 20, 2014, from [http://statistics.cbbh.ba:4444/Panorama/novaview/SimpleLogin\\_bs.aspx](http://statistics.cbbh.ba:4444/Panorama/novaview/SimpleLogin_bs.aspx)

5. Croatian bureau of statistics (2014). *Education, Science, Culture and Social Welfare*. Retrieved April 20, 2014, from [http://www.dzs.hr/default\\_e.htm](http://www.dzs.hr/default_e.htm)
6. Eurostat (2013, March 3). *Statistics A - Z*. Retrieved April 15, 2014, from [5epp.eurostat.ec.europa.eu/portal/page/portal/statistics/a\\_to\\_z](http://5epp.eurostat.ec.europa.eu/portal/page/portal/statistics/a_to_z)
7. INSTAT (2014). *Education*. Retrieved April 20, 2014, from <http://www.instat.gov.al/en/themes/education.aspx>
8. Montstat (2014). *Higher Education*. Retrieved April 20, 2014, from <http://www.monstat.org/eng/page.php?id=190&pageid=75>
9. National Bank of the Republic of Macedonia (2014). *Direct Investment Stocks by country and activity*. Retrieved April 27, 2014, from <http://www.nbrm.mk/default-en.asp?ItemID=9F1AE9DBC057374D8F2CD8BFEE4C7376>
10. NBS (2014). *Serbia`s Balance of Payments*. Retrieved April 27, 2014, from [http://www.nbs.rs/internet/english/80/platni\\_bilans.html](http://www.nbs.rs/internet/english/80/platni_bilans.html)
11. Republic of Macedonia State Statistical Office (2014). *Education and Science*. Retrieved April 20, 2014, from [http://www.stat.gov.mk/OblastOpsto\\_en.aspx?id=5](http://www.stat.gov.mk/OblastOpsto_en.aspx?id=5)
12. SORS (2014). *Education*. Retrieved April 20, 2014, from <http://webzrs.stat.gov.rs/WebSite/Public/PageView.aspx?pKey=127>
13. Transparency International (2014). *Corruption Perceptions Index*. Retrieved May 1, 2014, from <http://cpi.transparency.org>
14. Unctad (2013). *Investment country profiles. Croatia* (February 2013). United Nations.
15. UnctadStat (2014). *Exchange rates*. Retrieved April 20, 2014, from [unctadstat.unctad.org/ReportFolders/reportFolders.aspx](http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx)
16. Worldbank (2013). *Tariff rate, applied, simple mean, all products (%)*. Retrieved May 7, 2014, from <http://data.worldbank.org/indicator/TM.TAX.MRCH.SM.AR.ZS>



Universitat Autònoma de Barcelona  
Edifici E1  
08193 Bellaterra (Barcelona) Espanya