



LUND UNIVERSITY
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**THE EFFECTS OF FDI ON ECONOMIC GROWTH
IN CENTRAL AND EASTERN EUROPE:
MERGERS AND ACQUISITIONS, AND
GREENFIELD INVESTMENT**

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ABSTRACT

In the last decade Central and Eastern Europe faced surge in foreign capital inflows and economic growth. Foreign direct investment played significant role in forming government policies, development in the infrastructure and national income generation. While most research has been done on FDI impact on per capita real GDP growth, this paper takes alternative approach and examines the effects of two main FDI modes - greenfield investment and M&A - on economic growth in CEE. As methods are different in nature, there is expected to be different impact too.

The theoretical analysis of linkages between multinational corporations' presence and economic growth in host countries advocates for the positive impact, despite some negative spillovers. Transfer of modern technology, the know-how, managerial and markets knowledge from more advanced countries' multinational enterprises contributes to relevant experience accumulation and welfare development of the CEE region.

In the empirical part, panel data for the period 1992-2012 is analyzed. In order to control for differences within each country, the fixed effects model is employed. The results are ambiguous. Greenfield investment demonstrates positive effect, but it either loses its significance or becomes even significantly negative when more control variables are added. M&A does not show any high importance. Simultaneously, the interaction between greenfield investment and human capital is sturdy and shows positive effect on the growth in CEE, what is promising. This indicates that a certain threshold of education is required in order for new technologies, training programs and other advantages brought by transnational corporations to be successfully absorbed.

Key words: Foreign direct investment (FDI), greenfield investment, mergers and acquisitions (M&A), economic growth, Central and Eastern Europe (CEE)

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1. Introduction

Foreign direct investment has been an important determinant in a context of international economics and economic integration since last two decades. Trade liberalization, alleviated barriers, reduction in transport costs, rapid progress in technology and communication, and data processing together with development of new financial instruments fostered the globalization across the world. FDI is associated with transfer of physical capital and intangible assets such as knowledge, innovation or technologies among countries. Growth theories such as the Solow model state that capital accumulation, international capital mobility and progress in technology stimulate economic growth. Hence, FDI is one of the key elements of that process, development and financial stability. Academic discussions suggest that FDI should expand capital formation through the improvement of quality, state-of- art practices, technology as well as management skills. Moreover, due to the positive vertical and horizontal spillovers, local firms benefit through the exposure to foreign entities. Thus, it is not surprise that countries put efforts to attract foreign investors. Central and Eastern Europe is not exception - its region members try to converge as close as possible with Western counterparts. It is known that today the emerging markets are the biggest ‘magnets’ of FDI inflows. Therefore CEE region must be competitive in order to receive its investment stake. However, the region is diverse in productivity, growth and other macroeconomic policies. This leads to disturbances in equal region growth and convergence in general. While Far East countries such as China, Vietnam, Indonesia, and Malaysia receive capital from abroad, including from Western Europe, CEE region could be left with insufficient inflows. If this was a true, then the current gap between the West and East in Europe might even widen. One of the European Union (EU) objectives is to reduce this gap through creation of the free-trade area and partially common intra and inter politics.

European integration, foreign-investor-friendly policies, and encouraging perspectives led both M&A and greenfield investment to come to CEE markets. Fostering privatization and market economy approach opened gates for partnerships, takeovers, and new subsidiaries.

Many studies have been made on the impact of FDI on economic growth, as the topic acquired high interest among scholars and policy makers. The results, however, are not uniform in terms of growth and significance. Furthermore, only few researches have been done about FDI’s different modes effect on economic growth and only very few about M&A and greenfield investment implication on the economic growth in CEE region.

Thus, the aim of the thesis is to find the impact of M&A and greenfield investment on economic growth in CEE.

1.1 Methodology

In the research part, I perform panel data analysis and apply OLS multiple regression. Additionally, the fixed effects model is used to control the relation between predictor and outcome variable within a country. I investigate the correlation between FDI and the economic growth of CEE countries. To be more precise, the per capita real Gross Domestic Product (GDP) growth is taken as the response variable, whereas cross-border M&A sales, greenfield investment project value in a host country together with other control variables - as explanatory ones.

1.2 Limitations

Firstly, limited availability of FDI, M&A, and greenfield investment data providing individual country information by sector and industry. There was hard to find freely accessible bilateral transactions information, which is provided from private information statistics firms such as Financial Times Market Intelligence Unit or Thomson Reuters One.

Secondly, it is difficult to avoid endogeneity working especially with growth issues, because there might many factors, which could make actual impact on the growth or the growth itself may stimulate FDI.

2. CEE Region

The region of research is Central and Eastern Europe. In the research I included the following countries *Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia*. In some sources Austria and Russia are part of CEE, but I exclude them due to possible distortion of outcome in empirical part while making multiple regressions.

After a decade of boom in CEE¹ region, when countries experienced twice as big growth as Western counterparts, the market development almost came to standstill during Global crisis in 2008. However, today CEE is recovering and is known as important European region promoting inward FDI.

Due to favorable linkages within region, German car makers have erected factories in Poland, Swedish banks have set subsidiaries in Baltics, and Austrians have outsourced production in Romania or Hungary. This is just a rough example of positive intra-EU cooperation. The

¹ The full list of CEE countries: <https://stats.oecd.org/glossary/detail.asp?ID=303>

combination of location advantages, 104 million consumer base, relatively low labour costs, friendly and improving business atmosphere, as well as positive growth perspectives constitute attractive bait for transnational corporations (TNC). Investing foreign companies may expect to get close access to relevant supplies and market. What is more, CEE geographical position is special because it is a bridgehead between advanced Western Europe and emerging Russia, Turkey, China. This all creates favorable conditions for vertical and horizontal inward FDI in CEE. Even though CEE is described as one region, but it is diverse where members are competing for inflows from TNC. Local governments implement attractive policies, promote transparency.

Also, countries are supported through various EU funds, which improve climate for new investments and business development. The funding programme is part of EU regional policy² inducing countries' solidarity and common initiatives for the higher welfare in Central and Eastern EU countries. What is more, the programme aims to improve transport links, boost education and professional skills, invest in ecological environment, support energy efficiency, improve access to digital technology, and boost small and medium businesses.

Below there is a summarizing table about countries of interest (*table 2.1*). There exchange rate mechanism II³ (ERM) indicates whether country seeks to be a part of Eurozone or not. For example, if country intent to introduce Euro currency, it must be a part of ERM II for certain period and meet particular conditions for exchange rate fluctuations.

Table 2.1: Some Key Facts on CEE Countries, 2013

Country	Member of EU	Joined EU	Currency	Member of ERM II*	Population**	Ease of Doing Business Rank***	GDP/capita (EUR)****
Bulgaria	yes	2007	Lev	no	7.284.552	58	5.500
Croatia	yes	2013	Kuna	no	4.262.140	89	10.200
Czech Republic	yes	2004	Koruna	no	10.516.125	75	14.200
Estonia	yes	2004	Euro	no	1.320.174	22	13.800
Hungary	yes	2004	Forint	no	9.908.798	54	9.900
Latvia	yes	2004	Euro	no	2.023.825	24	11.600
Lithuania	yes	2004	Litas	yes	2.971.905	17	11.700
Poland	yes	2004	Zloty	no	38.533.299	45	10.100
Romania	yes	2007	Leu	no	20.020.074	73	6.400
Slovakia	yes	2004	Euro	no	5.410.836	49	13.300
Slovenia	yes	2004	Euro	no	2.058.821	33	17.100

* Exchange Rate Mechanism II; http://ec.europa.eu/economy_finance/euro/adoption/erm2/index_en.htm

**Source EUROSTAT; <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>

*** The World Bank ranking; Higher the ranking, more conducive to start business; <http://www.doingbusiness.org/rankings>

**** Source EUROSTAT; GDP/capita at current market prices.

² More information on policy: http://ec.europa.eu/regional_policy/what/index_en.cfm

³ More information on ERM II: http://ec.europa.eu/economy_finance/euro/adoption/erm2/index_en.htm

3. Foreign Direct Investment Foundation

The Organization for Economic Co-operation and Development (OECD) describes FDI as follows (*OECD Factbook 2013*, p. 86):

“FDI is defined as cross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy. The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the direct investor on the management of the enterprise”.

3.1 Characteristics of FDI

When company is active home and abroad or several countries, it is called multinational enterprise (MNE) or transnational corporation. Investments done by TNC in foreign country are referred as foreign direct investment. Usually firms perform this due to an advantage they already have such as knowledge of production, sales markets, capital, or due to an advantage they will have after investing overseas, such as access to supplies, cheap resources, and closer distance to customers. Firm could invest in a foreign country in several ways – by setting up an affiliate, by purchasing shares of local firm, by merger or joint venture. Cross-border M&A and greenfield investment are two most popular methods of entering foreign markets. In addition to this, the OECD Handbook on Economic Globalization Indicators (same as United Nations Conference for Trade and Development (UNCTAD) World Investment Report (WIR)) extracts these two methods while analyzing national and international investment trends. According to the OECD, a TNC should have acquired at least 10 percent of voting stock in order this would count as FDI. Usually, investing companies abroad have significant influence on company they are investing in. In practice, open economies with sufficiently skilled workforce and considerable growth perspectives attract foreign capital way better than closed economies or constrained by strong regulations.

In addition, FDI might face the barriers, which are reflected in the FDI index⁴. It observes foreign equity limitation, approval mechanisms, restrictions on foreign labour, and operational limitations. OECD Factbook (2013) notices that the service sector across countries is the most restrictive and the manufacturing sector remains the most open economic sector.

⁴ More information, <http://www.oecd.org/investment/fdiindex.htm>

3.1.1 Motivation for FDI

At the beginning, FDI was made mainly due to low cost resources using own advanced technologies and management skills. Later, in more recent times, market-oriented FDI came into play, seeking to supply local markets. There are various determinants influencing investor's decision whether to engage in FDI or not. The upstream integration means that MNE purchase a supplier and gets cheap access to inputs. When TNC purchases a firm making the same product in order to expand its total production, then it is the horizontal integration. The downstream integration happens when an investor acquires a firm using or distributing its products to increase the added value. If an international investor is willing to do something different than its usual business, it can diversify the activities by purchasing a firm which has no connection to MNE's present activities. Of course, there might be other factors influencing such decisions. Home country's total FDI outflows increase together with local MNE financial soundness. Exchange rates could also be another important determinant. If host country's currency is weak, then an investor can "cheaper" acquire a firm or export the end-product to the final destination. From the inflows perspective, investing MNE can look at host country's GDP, market potential, labour costs, favorable laws, skilled work force, taxation policy, or environmental protection issues.

3.1.2 FDI Structures

FDI can be measured as flow of unit per time or as an accumulated stock. FDI stock is referred to as a value of daughter-company share of capital and reserves including retained profits attributed to mother-company plus foreign affiliate indebtedness to parent company. The net flows might be positive or negative indicating if TNC located in host country invest more abroad than foreign TNC investing in host country. Moreover, net inflows of FDI are a part of GDP together with domestic investment forming the total investment. The Balance of Payment shows FDI as sum of equity capital, other long-term capital, and other short-term capital.

What is more, FDI could be inward and outward; inward flow is related to all direct investments (summation of M&A sales, greenfield investment, re-investments, and disinvestments) by non-residents in host country, whereas outward flow investment is done by reporting economy abroad.

Assessing FDI by type, it could be *horizontal* or *vertical*. The former means that a company replicates the production overseas to sell locally in two or more countries due to tariffs, barriers, location advantage and other certain considerations. When a company produces goods overseas not for sales in local market, then it is vertical FDI. When prices of supplies are relatively lower in

foreign country than in home country, then firm tends to integrate the production vertically across borders. Or if a market is small and contains production cost advantage then a firm can adopt vertical FDI too. Today most of FDI are horizontal, as the market access is considered as one of most important determinant of establishing a subsidiary abroad.

The main components of FDI financing are the following: equity investments, reinvested earnings, and intra-company loans. Equity investments are reflected mainly in cross-border M&A. The reinvested earnings depend on affiliated profits. After a successful financial year dividends are not distributed to parent company but reinvested in new capital. The last component of FDI, the intra-company loans, is provided by investing company to its subsidiary without intention of receiving funds back. Usually, firms engaging in FDI have long-term plans, what is opposite to portfolio investments in bonds or shares due to speculative reasons. Additionally, FDI flows enable access to property rights building a new plant or acquiring existing firm.

3.1.3 Ownership Factor

Another important issue related to FDI is the property rights approach. The lack of control over the process within the supply chain and production or miscommunication between host and home economies may cause the holdup problem. For example, when the end-product producer does not receive relevant parts or other type of product from partner in foreign country, then a stand-still appears. Moreover, now the seller cannot fulfill obligations to its client. The lack of control appears due to the incomplete contracts, when one of the partners does not carry out the obligations agreed upon a product. Usually, parties often encounter unforeseen problems. Therefore, the level of ownership is a very important determinant in making foreign investments due to control rights. In order for the investment to be sufficient, the control rights are required. As the supplier tends to underinvest in specialized inputs, and hence it takes poor bargaining position, the final good producer can mitigate the holdup problem for suppliers by contributing to their capital investments. However, not all companies are able to acquire a firm abroad or build there a new plant because they are heterogeneous and have different levels of performances.

3.2 Exporter's Characteristics

Firstly, exporters differ from non-exporting firms in several characteristics. American firms' example shows that exporters are reasonably larger than their non-exporting counterparts. Also they

are more productive in terms of value-added per worker and total factor productivity, and pay higher wages. Other important fact, exporters are more capital- and skills- intensive than non-exporters, especially in developed countries. However, it is harder to find such evidence in developing countries, because they are likely to be abundant in unskilled labour (Bernard, Jensen, Redding, Schott, 2007). Thus, it is reasonable to assume that high productivity enables entry into export markets. Accordingly, relatively high sunk entry costs deter firms from exporting or continuing sales abroad. There is miscellaneous evidence about productivity improvement ex-post exporting. In contrast to this feature, the growth in employment and output tend to increase.

Secondly, export could be seen as a measure introducing foreign markets – “learning by exporting”. Interaction with foreign competitors and clients may give relevant knowledge about processes and cost-reduction while rising quality. Moreover, exports increase firm’s scale. Foreign competition forces firms to be more efficient and promote innovations (Greenaway and Kneller, 2007). Additionally, the learning and exporting mixture could be seen from the other time perspective. Firms may take necessary improvements in technology before taking decision to enter foreign markets and after carefully implementing research and development (R&D): “learn to export rather than learn by export”.

Melitz (2003) shows that exposure to trade induces only the most productive firms, simultaneously forcing least productive entities to exit. Entering the industry, a firm pays fixed entry costs, which are attributed later as sunk cost. Firms also permanently face competition inside the country and outside, thus, exporters are at relatively higher level in terms of productivity than local firms. Furthermore, the existence of fixed production cost implies that there is some kind of lower threshold⁵: if companies fail to get it over, they generate negative profit and therefore exit the industry or export market. Variable and fixed costs create a higher threshold⁶, and productive firms generate profit from exporting only when above this threshold. The increase in labour demand by advancing production and new entrants bid up the real wages and this pushes less productive firms out of the market. In equilibrium, the mass of new entrants, which draw a new productivity line in lower threshold, equals the mass of businesses, which exit the export market due to unaffordable high export cost.

Last but not least factor of firm’s initiative to operate abroad has connection with trade liberalization. This includes tariffs, tax rates, foreign-business-friendly policies adopted by two or more partner countries. The easier access to foreign markets creates more predictable and stable foreign economy, as well as increases opportunity for home economy firms to engage in cross-country trade. But again, the greater number of trading partners forces the least productive firms to

⁵ “Zero-profit productivity cutoff”

⁶ “Export productivity cutoff”

exit, while more advanced firms enjoy greater profits and growth. Thus, only the most productive firms engage in foreign activities. Accordingly, only the most productive firms from this pool later decide to engage in FDI rather than export.

3.3 FDI versus Exporting

As mentioned above, just the most productive firms engage in foreign activities. Usually firms prefer FDI over export because of two main reasons: as the size of foreign market increases and export cost increases; the reverse happens when the cost for establishing an affiliate in a foreign market increases. This scenario could be more applicable for horizontal FDI rather than for vertical. Adding heterogeneity to this context, it enables firms within the same industry to choose whether to export or become TNC. The cost plays here an earth-shattering role. The difference in weight between fixed and variable cost influences the decision on how to operate in foreign economy. Normally, fixed costs in exporting include advertising, market research, distribution channels, and product compliance, what is all attributed to the export sunk cost. Additionally, transport cost is taken into consideration. Whereas in FDI transport cost decreases, fixed cost relatively increases. An erection of a new plant abroad is more costly than exporting. Hence, even though FDI dismisses transport cost, only most productive firms become TNC. Firms performing in a mid-range level continue to export, whereas least productive companies stay in the domestic market (Greenaway and Kneller, 2007). Gain from scale economies leads to exports rather than to FDI. Furthermore, there is another approach to producing and selling abroad. Some TNC establish affiliates abroad in order to export goods to end-consumer to the third country, especially when two countries are within free-trade area and client of final product is outside the bloc. These are so called *export platform FDI*. Also, there could be that the presence of FDI in host economy enforces its exports. Thus, FDI is important driver of trade flows worldwide, generally (UNCTAD WIR, 2013).

Alternatively, the decision on whether to engage in FDI rather than exporting is reflected in Dunning's OLI paradigm, which is a framework made in 1979 (Dunning, 2000). The paradigm was derived from the Internalization theory and Transaction theory. It contains three main pillar advantages of engagement in FDI - ownership advantage, location consideration, and internal asset keeping. The ownership advantage is sometimes called firm specific advantage, which is usually intangible and can be transferred within TNC at the low cost, for example, benefits economies of scale, entrepreneur skills, production technology or trademark. The second pillar location advantage is also called the country specific advantage. In this case TNC locates its operations abroad considering economic, political, and social cultural advantages. The economic advantage consists of

transport costs, telecommunication, market size, quantity and quality of factor of production. The political advantage includes specific inward FDI-friendly government policy, taxes, and trade barriers. The third advantage reflects actual distance between home and host economies, language and cultural differences, and general attitude of locals towards foreigners. The third pillar of OLI paradigm is the internalization advantages. Due to market imperfection, MNE take advantage from keeping all activities within the same organization, for example, when a market functions poorly and external transactions linkages are expensive.

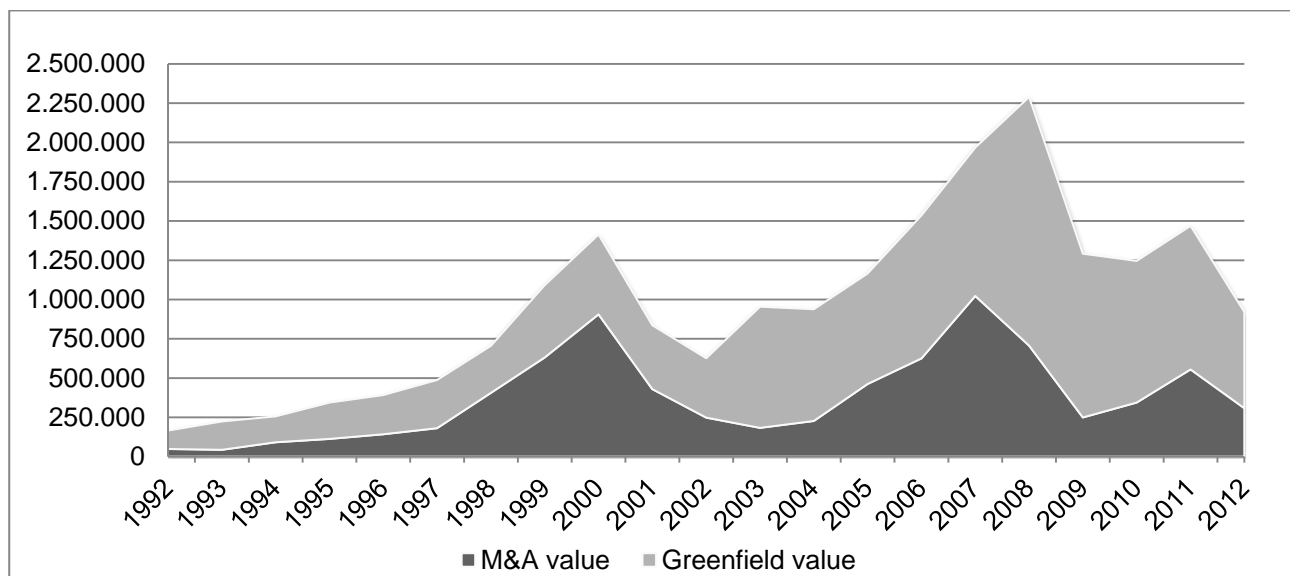
3.4 FDI and Externalities

National governments put a lot of efforts to attract foreign investment because it augments spillovers effect to the benefit of locals and boosts national income level (Görg and Greenaway, 2003). Current research suggests about positive effects of FDI on local market, which happens either through vertical or horizontal spillovers. As foreign investors come to a host country, they bring with them technology, advanced methods of production, resources, experiences, international connections, and the know-how. When outward FDI is in direction of “developed-to-developing” country, the high standards are brought, which enables the local subsidiary to provide quality. Lipsey (2002) finds positive FDI impact on wages in host country. TNC pay higher wages than locals for several reasons. Foreign-owned firms tend to be in higher wage sector, also they want to hire educated and better-qualified workers, and motivate them. Usually MNE are larger and more capital-intense than local firms and may pay higher salaries for the higher quality provided by workers. As a consequence, if local companies do not want to lose in labour competition, they have to converge in salaries or at least to increase them sufficiently. Positive productivity externalities might also occur, enabling local firms to improve their efficiency. This could happen in several cases. Firstly, workers moving from MNE to a local company carry with them higher skills due to training or acquaintance with advanced technology, some of them might have gained managerial experience and have relevant knowledge – that is the knowledge spillover. Secondly, rising competition from MNE empowers local firms to work more efficiently using their current production processes. It is also known that competition leads to faster adaptation of new technologies. Furthermore, exporting MNE could be a good example for local firms to learn exporting. As MNE establish distribution channels, create transport infrastructure, introduce themselves to local suppliers or clients, it is a good opportunity for locals to learn either from imitation or collaboration.

On the other hand, such externalities could be negative. If TNC, which is very advanced in technology and automatization, is acquiring a large but inefficient local company, most probably it will sack a bunch of workforce. Small local firms that are not able to compete with new foreign investors will exit the market. Sometimes FDI provoke fast economic growth, but destruct old production techniques and production skills, and in such way prohibit country from stability.

4. Main Methods of Foreign Market Entry

Figure 4.1: M&A vs Greenfield FDI in the World, 1992 - 2012 (millions of USD)*



*- Dot (.) on y-axis in the chart represents thousands.

Source: UNCTAD

There are two main methods to enter a foreign market; the choice between M&A and greenfield FDI is influenced by industry-specific factors. Technology and production are more relevant implementing a greenfield investment, while culture, transactions costs, attitude towards acquisitions by foreigners, conditions in capital markets, and importance of future intermediary are more important for M&A deals. Looking at the popularity between M&A and greenfield investment, it varied across the time and regions. Before 1980's, greenfield investment was a dominant market entry mode of FDI. Afterwards, the value of acquisitions in host countries exceeded the value building new plants or opening new subsidiaries by foreign enterprises and hence M&A became a trend for 15 years. After 2000s when global stocks bubble burst, the pace of M&A deals slowed down (WIR, 2005). However, starting from 2004 M&A grew again together with world markets and constituted over 50 percent of FDI in 2007 (*figure 4.1*). Then again, it significantly dropped together with recent financial crisis. Contrary, greenfield investments in the

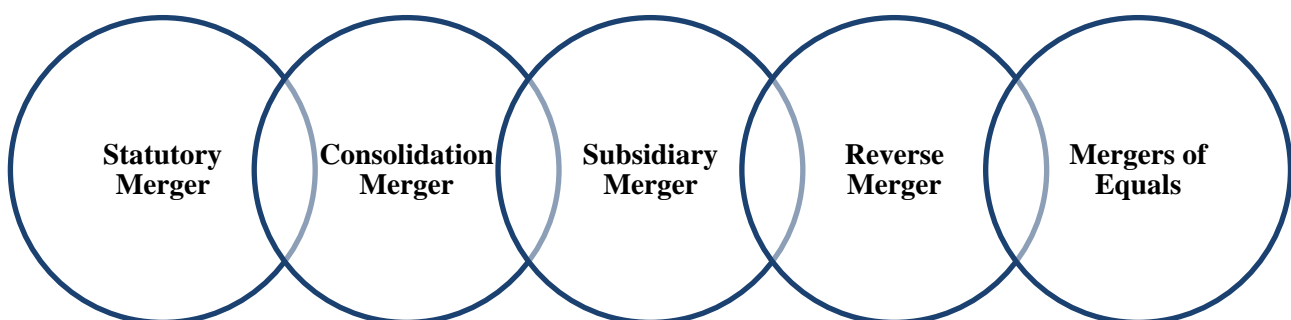
recent decade took more important role in FDI than M&A, except for 2006 - 2007. History and statistical data show that cross-border M&A were more often executed between developed countries (in terms of number of projects and value), whereas greenfield investments were done by multinationals from developed countries into emerging or transition economies. Thus it is relevant to analyze in my thesis the mode distribution in CEE, which is less developed than Western or Northern Europe. A rise of emerging markets in the last decade increased the number of greenfield investments and the importance of collecting data for it, that was not the case before beginning of 2000.

4.1 Mergers and Acquisitions

Even though M&A is normally used as a single word, these two are not the same and the distinction between these two could be very blurry depending on each special case. *Merger* happens when two or more companies join and become one company. Then stocks are surrendered by shareholders in exchange of stocks of a new company that has just merged. Firms combine resources in order to accomplish common targets. However, often one firm dominates this synergy, and puts a foundation for an upcoming acquisition. Accordingly, *acquisition* is when one firm purchases stocks of other enterprise in order to have control over the company (10 to 50 percent of total shares) or to increase the ownership significantly (more than 50 percent).

4.1.1 Mergers

Figure 4.2: Type of Mergers



Source: OECD Benchmark Definition of Foreign Direct Investment

There are five main types of mergers between companies (*figure 4.2*). *Statutory* merger means that one targeted company after the agglomeration stops existing and the acquiring firm takes over assets and liabilities of the merged firm. The shareholders of the targeted firm usually become joint owners of new combined company. The other type - *consolidation* - reflects establishment of completely new firm from two or more consolidating firms. The entities after the merger do not exist anymore and shareholders of former firms become owners of the new firm. The consolidation, as a rule, is executed between enterprises of equal size. The third type merger *subsidiary* means that the acquired firm will be transformed to a subsidiary of the mother-company. *Reverse* merges represent a deal when the acquiring firm merges with the targeted company and afterwards acquirer ceases its existence. This type of merger is very attractive when targeted company has a rich, well-known brand name of a long tradition, or is listed, for example, on a stock exchange. After the merger, the acquirer launches external funds through the stock exchange channels or gets an access to a bigger market-share using its new brand. The last type *merger of equals* happens when two firms, often of equal size, decide to form a new firm and continue to operate under the new established firm. Old stocks are surrendered and new ones are issued. This type is very similar to consolidation, but under equal mergers it might happen that actually one company was acquired in such a way that publically it is proclaimed about merger, but actually there was buyout.

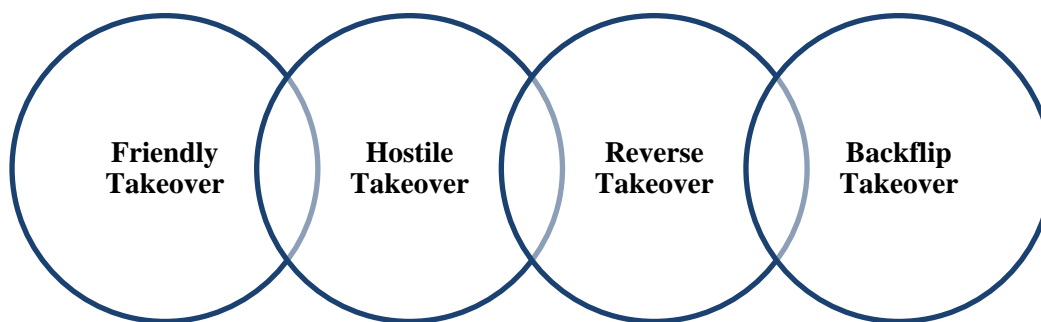
Furthermore, there are different strategies and intentions for mergers. *Horizontal* merger appears when two competitors merge in order to enhance their market power. *Vertical* combination is performed between two firms of different activities, for example, between a producer and a distributor. *Market extension* merger's initiative occurs when two companies selling the same product in different markets merge. *Product extension* strategy is used between two firms which make unlike but related products and sell in a common market. *Conglomerate* merger is usually made between firms, which do not have any relations regarding products or services; or between firms representing different industries.

The merger among enterprises without doubt creates respective synergy which allows to forward business efficiency. The combination of firms could be positively encouraged by several reasons, such as: staff reduction, which is associated with cost saving policy; or economies of scale through common communication system, office supplies purchasing power; or acquiring new technology in order to stay up-to-date and do not stay behind competitors or even get competitive edge; or improved market reach and visibility. These all factors are stronger when firms combine their operations instead of operating alone in the market. Of course no one is assured with a positive synergy. In reality it is possible that merger is done without scrutiny and long pre-merger period, and then the combination between firms could have a sour aftermath.

4.1.2 Acquisitions

In business the term *takeover* could substitute the term *acquisition* depending on, for example, in which country they are used, and on different interpretations due to historic or language reasons. Acquisition is different from merger, though sometimes just very slightly. It is a transaction between two companies, where one company is a purchaser and other is a targeted or purchased company. The acquirer purchases all or most assets and liabilities of the targeted firm in order to get a full control over it. In contrast to a merger, there is no exchange of stocks or consolidation advent. Acquisitions are usually financed with cash, but not necessarily directly from purchaser's account. The acquiring firm can raise funds needed for the transaction by issuing bonds or borrowing from a bank.

Figure 4.3: Type of Acquisitions



There are four main types of acquisitions (*figure 4.3*). *Friendly* takeover is done between two companies with common interests and no rejections from the target firm management (board of directors). Additionally, an agreement to be acquired could be issued. If the board sees the acquisition will benefit shareholders, they usually recommend to owners to accept the offer. It is common that in private companies members of board and shareholders are the same people. When managers are closely related to owners, and are like-minded, the acquisition will be friendly.

Conversely, *hostile* acquisition occurs when target company management is unwilling to accept the deal but the bidder continued offering and making official announcement of its intentions. This could happen in several ways. The acquirer can make a public offer above the market price or persuade the majority of shareholders to replace the board. Also, the bidder can purchase significant amount of stocks on public market, sending a respective message to current management. *Reverse* takeover refers to a sales transaction when the purchaser is smaller than the target firm or when a

private firm purchases a publicly listed company with an aim to launch public share market in efficient way. *Backflip* takeover is the type of acquisition when the purchaser becomes a subsidiary of the target firm after the deal is executed. It is a very convenient way for a larger but less-known firm to use the well-known name of the purchased company, which currently might be not at the best business condition.

Firms making acquisitions normally seek direct profitability through greater efficiency and economies of scale. Moreover, companies executing takeovers could have strategic goals which contain positive externalities caused by secondary effects such as local market excess, distribution channel, brand name advantage or elimination of a competitor. On the other hand, the aim of acquirer could be opportunistic expecting that the present deal by purchasing the target firm at a reasonably low price in a long-run could be very profitable. However, instead of merging or acquiring a firm abroad, there is another opportunity to enter a foreign market.

4.2 Greenfield Investment

Greenfield investment is a method of foreign market entry, which includes 100 percent offshore ownership and requires setting up all necessary infrastructures starting from zero to operate the business. As a matter of fact, greenfield projects are a popular sort of investment in less competitive markets, emerging markets or developing ones because of expected economic growth and higher returns. However, due to some level of uncertainty in those markets, credit ratings, political instability's potential or military intervention, it is also considered to be a risky investment. Currency risk, difficulty raising capital, poor corporate governance system, and liquidity constrains could even provoke additional risks. Contrarily, a newly established company in a host country may be in danger if its parent firm faces a financial burden. Greenfield investment represents corporate strategy of internal growth, what is different from M&A. It is also quite difficult to measure the timing of this investment, as it is not always clear when greenfield investment is implemented fully; this means when the investment should be considered as greenfield investment. Furthermore, it is assumed that greenfield investment has different effect on host economy than M&A, mostly, due to job creation.

Analyzing motives of choosing greenfield investment to enter a foreign market, we can think of relatively low transaction costs, greater project coordination and efficiency in comparison to M&A. As there is no target company, there is no need for additional investigation on proper integration and evaluation. Avoidance of external market deals may protect from usual time lags managing international cooperation. Another very important argument in favour of greenfield investment is

the ownership advantage exposed in management and the use of brand name, superior technologies, product diversification and various accesses to capital markets. One more advantage is location, because the investor can almost freely pick up a place for a new plant, considering such factors as supplies, distribution channels or local labour competitiveness. What is more, a newly erected plant has no business history and there are always good reasons for a positive start with productive labour and optimistic future expectations.

4.3 Greenfield Investment versus M&A

There is an assumption that M&A bring fewer benefits to host economy at the time of market entry than greenfield investment because M&A do not add productive capacity and only transfer ownership from domestic to foreign and close some of target firm activities (WIR, 2000). Whereas, greenfield venture provides fresh capital and new jobs. If the acquiring firm is a global oligopolist, this could disturb competitive market development by its dominance. It is not a secret that TNC tends to acquire the best local exporters. As enterprise purchases a foreign firm it immediately gets competitive advantage receiving local market share, brand name, technology and other specific assets and in doing so brings needed competition and fosters host market development. Therefore, the impact can be ambiguous - the future of local market conditions depends on investors' characteristics, target company stance and local participants' business health. Such foreign control may also hurt local entrepreneurship and technology and capacity building. M&A may create not only economic but social and cultural concerns. For example, in such industries as entertainment and media, purchases of local firms could threaten national identity. Also big TNC are usually associated with globalization, thus their presence may adversely affect local small and medium-size enterprises (SME). Thus, in such context, M&A are seen from negative point of view, whereas greenfield investment from the opposite. The other interesting thing is that the host country's media tend to advertise more takeovers made by national companies rather than foreign ones or even describe with indignity M&A made by foreigners⁷.

Greenfield investment and M&A are different in characteristics and impact of entering. In developed markets, greenfield investment and M&A can be seen as alternatives, but in developing or in transition markets - they are not. There might be potential to invest but only few firms to acquire. Looking from the government policy perspective, it is still often the case that M&A are allowed *de jure*, but *de facto* various constraints protecting local ownership exist. Moreover, corporate governance is different among developed and developing countries, and consequently can

⁷ For example, case of Vodafone AirTouch from United Kingdom acquisition of Mannesmann in Germany in 2000.

influence the method of FDI. In the times of large privatization programme, as happened in CEE during the 1990's, government welcomes both greenfield investment and M&A. Considering the financial matters of these two methods and their impact on local currency, there are important differences. In the case of M&A, the funds are transferred immediately, whereas in greenfield investment this transfer could be done gradually. If M&A deal value is overwhelmingly high, the local currency might be affected and, hence without a central bank intervention through open market operation and sterilization – it will appreciate. What is more, the stock market soundness has its own role on M&A. Usually M&A are more sensitive to financing conditions due to turmoil in stock market than greenfield investment. Accordingly, the depressed stock prices reduce value of M&A deals. Giovanni (2005) also finds that home country's total market capitalization has a positive impact on domestic firms investing abroad.

Looking from the firm level perspective, the previous studies show that the investing company's bank ratings play important role in industrialized countries. If investor bank rating is downgraded, firm will most likely choose M&A rather than greenfield investment because the former required usually less funds in comparison to the latter (Alba, Park, and Wang, 2012). However, in emerging markets it could be different due to political risk and government regulation.

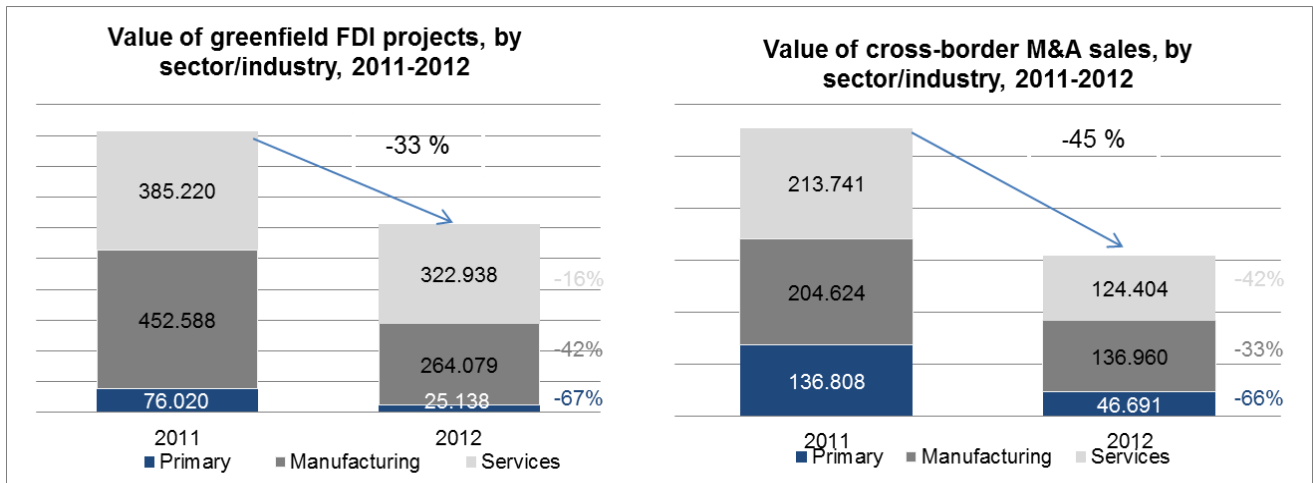
Generally, investors choosing M&A over greenfield get two advantages: speed and quick access to acquired assets. Protagonists of greenfield investment have own freedom of choice and management. Regions with rich and stiff entrepreneurial traditions may be less friendly for M&A. Thus, instead of codifying and articulating the culture of the company, it could be easier to build new traditions, establish routines in a new venture (Wang and Wong, 2009). Regarding the impact on host economy, there is no clear answer for a short-run. M&A may be short-termed, quick profit seeking and greenfield could be still struggling to perform. In the long-run the positive effects evolve as such job creation, technology transfer, skills upgrading and increase in competition. Also, both types of foreign market entry allow diversifying home economy production and increasing economic integration across countries.

5. Global FDI Tendencies

According to UNCTAD *World Investment Report 2013*, after the vanishing global financial crisis in 2012, which had strong effect in Europe particularly and slowed growth in emerging economies, investors concentrated on shareholders' returns rather on new cross-border investments, including greenfield and M&A. In 2012 greenfield investment reached 10-year lows and fell by 30 percent in comparison to 2011 (*figure 5.1*). The contraction was even greater in developing economies. M&A

fell by 45 percent for the analogues period. In the number of deals and projects, the downturn was not so deep, 15 percent for greenfield and 11 percent for M&A. The inadequacy could be explained by reduction in size of projects, as average investment value in greenfield projects decreased by 21 percent and 38 percent in M&A accordingly.

Figure 5.1: Global Greenfield Projects and M&A, by sector, 2011 – 2012 (millions of USD)

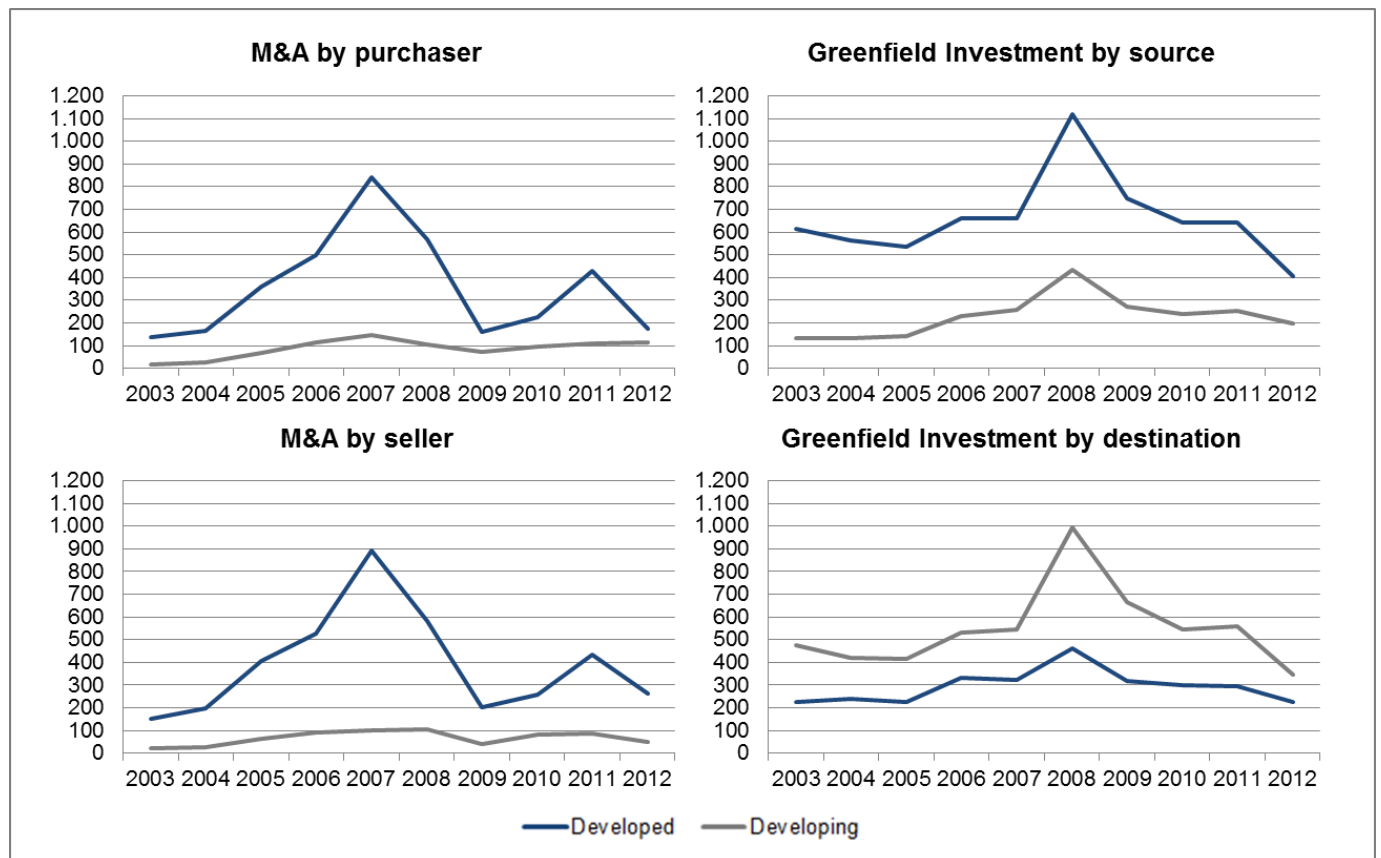


Source: UNCTAD

Analyzing main three sectors of FDI separately, the primary sector was hit mostly by downturn in mining, quarrying and petroleum industries. The contraction appeared in both greenfield investment and cross-border M&A with the biggest shrinkage in developing economies. Activities in the manufacturing sector stagnated in all group of countries - developing, developed and transition economies. In this sector the contraction was influenced mainly by decrease of number of projects in greenfield investment and plunge in M&A average deal value due to business fragile confidence to engage in to projects. Though MNE put cross-border investments on hold, the service sector was affected the least. Especially the decrease was not so big in greenfield investments in developing countries, showing that business in services, transport, trade and finance are still very relevant in these markets. Historically consistent investment in these fields by foreigners contributed to creation of business confidence and entrepreneurial environment. Additionally, it should be pointed out that the global crisis hit firstly the financial sector and later it got across to the manufacturing sector. Therefore, struggles in Eurozone, deceleration of growth and decrease in demand especially in China and India in 2011 slowed down FDI globally.

UNCTAD forecasted that world FDI should increase from 1,35 trillion USD in 2012 to 1,6 trillion USD in 2014 depending on macroeconomic conditions and investors' confidence level. Accordingly, TNC can convert their accumulated cash savings into new investments (WIR, 2013).

Figure 5.2: Cross-border M&A and Greenfield Investment, by developed and developing countries, 2003 - 2012 (millions of USD)



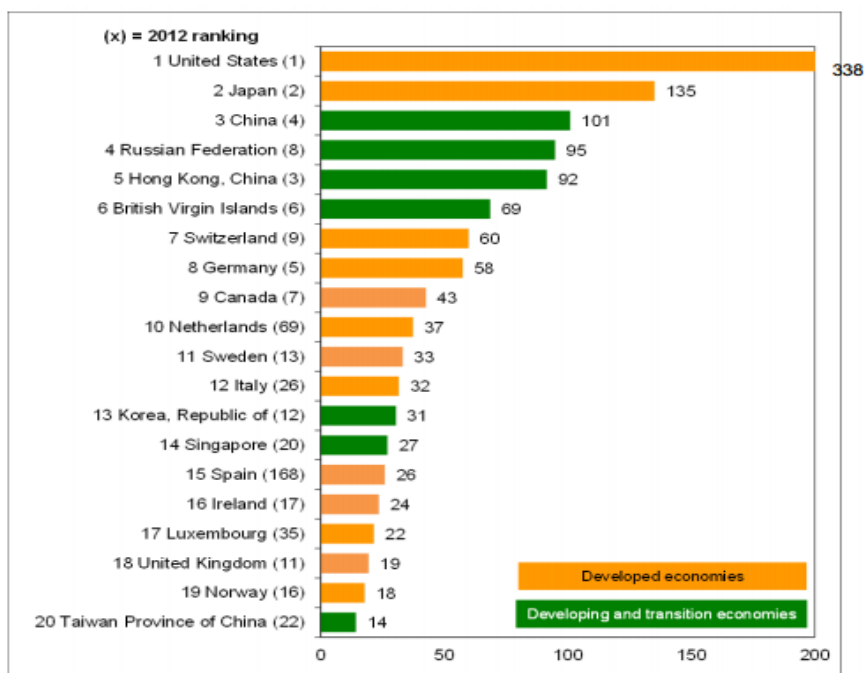
Source: UNCTAD

In the second part of 2013, TNC from developing economies showed positive investment activity abroad reaching 460 billion USD, which together with transition economies investments creates 39 percent of global FDI outflows, whereas the rest contribute to developed countries (UNCTAD GITM⁸, 2014). Almost half of FDI consisted of deals in equity. As a consequence, average transaction value has increased by 5 percent. Whereas developed countries MNE did not show significant increase in outward FDI comparing to 2012: as US investments drop down by 10 percent, Europe's outward FDI has increased by 10 percent, and Japan also showed upward trend third year in a row, making Japan the second largest investor in the world (*figure 5.3*). TNC from this region continued to hold record-high level cash reserves as part of reinvested earnings in their foreign subsidiaries. Two-thirds cross-border M&A done by Southern MNE were targeted to developing and transition economies' subsidiaries owned by firms from developed economies. This indicates a transition in ownership with increasing relevance of developing economies TNC in comparison to developed ones. *Figure 5.2* indicates the dynamics of M&A and greenfield investment in last twenty years: M&A source and sales countries are same, developed countries; greenfield source is developed countries, where destination – developing ones. UNCTAD foresees

⁸ GITM – Global Investment Trend Monitor

an increase in TNC investments abroad again for 2014 and 2015 encouraged by economic prospects. It is worth to mention that in 2013 developed world TNC executed mostly M&A in specific fields such as telecommunications, business serves, whereas developing MNE invested mainly in consumer sector such as hotels, food and beverages, utilities, finance sector.

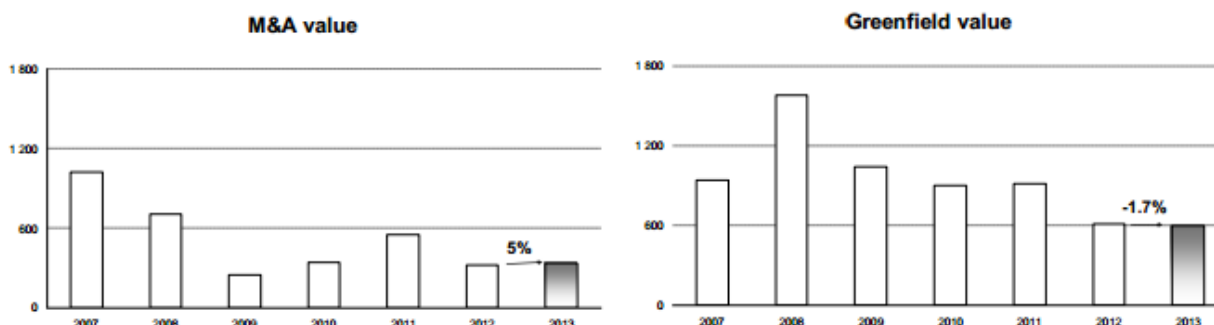
Figure 5.3: Top 20 Investors of the World, 2013 (billions of USD)



Source: UNCTAD, Global Investment Trend Monitor, April 2014

Unfortunately, greenfield investments are not distinguished in the April report made by UNCTAD Division on Investment, but in previous one it is mentioned that greenfield projects remained roughly unchanged to 2012 (figure 5.4). Despite a lack of information, it is still reasonable to assume that if inward FDI is active in emerging and transition markets, greenfield projects will follow accordingly.

Figure 5.4: Cross-border M&A Sales and Greenfield Investment Projects, 2007 – 2013* (billions of USD)



Source: UNCTAD, Global Investment Trend Monitor, January 2014.

*-Greenfield data for year 2013 is estimated based on months January–November.

Hughes (2014) sees bright perspectives in global market and strong takeoff for M&A in 2014 particularly in Asia-Pacific and US, as financial sector is showing strength and ability to finance such projects. The top seven sectors, which should attract the biggest flows in M&A deals, are: 1) Telecommunications, Media and Technology (TMT), 2) Energy, Mining and Utilities, 3) Consumer, Retail and Leisure, 4) Industrials and Chemicals, 5) Financial Service, 6) Healthcare, 7) Real Estate and Construction. The Euro currency stabilization, American fiscal health, Chinese market-driven economy, growth potential in emerging economies are the factors that inspire for a more sound M&A forecast. Simultaneously, investors' risk awareness, potential US debt ceiling and wind-down Federal Reserve quantity easing, possible assets price 'bubble' due to low interest rates may disturb this forecast.

6. FDI and Economic Growth

Adam Smith (1976) in his prominent book *The Wealth of Nations* wrote (translated this into modern economics), that the average level of country prosperity can be measured by country's income per person: "The annual labour [produce] of every nation is the fund which originally supplies it with all the necessities and conveniences of life...to the number of those who are to consume it...". Hence the annual level of real GDP per person should be of high importance considering the welfare. Consequently, also nowadays the GDP growth, annual increase in GDP per person, is one of the most important economic variables. The process of growth is seen as the way country can reach higher level of income. Moreover, GDP per capita indicates average standard of living of country and GDP per worker shows average productivity of labour in the country. In most of recent growth models the technological progress is an ultimate source of GDP growth. The exogenous economic growth under the diminishing returns to scale is explained by external technological progress, which could be influenced through the capital and labour accumulation, as well as their efficiency. In addition to this, the increase in total factor productivity, which is intangible factor ranging from technology to knowledge and cannot be explained by capital or labour accumulation, may contribute to the progress in productivity too. In more modern endogenous growth theories, increasing returns to scale the growth are also explained through the technology prism, but the action is different. Here the GDP per capita increase is influenced by endogenous forces rather than exogenous. Therefore, the investments in human capital, innovation and knowledge are held significant determinants of the economic growth. Productive externalities or R&D are the main drivers of endogenous technological progress (Sørensen and Whitta-Jacobsen, 2010). The externalities occur, for example, when workers face new, often more modern, capital or when

learning by doing and therefore obtain better and more sophisticated skills. In R&D-backed growth models, the main interest is put on understanding how R&D contributes to the economic growth. As experts in universities, public and private entities are engaged into knowledge creation, specialist are occupied with ideas and processes of better technology and methodology creation, it is obvious that R&D is important work-horse to be successful in these activities. Thus innovative efforts of labour and existing level of technology generate new insights, which result in new and higher level of technology.

FDI is much related to cross-border technology transfer and R&D. Therefore it is rational to assume comprehensive effect of FDI on economic growth. In both cases, M&A and greenfield investment, before making a decision to enter a foreign market, TNC conduct particular research. Moreover, R&D internationalization by MNE is quite recent phenomena. Until mid of 2000's knowledge-intensive corporate functions almost exclusively were kept in developed countries, but in the last decade industries such as automobile, pharmacy, electronics established R&D in developing countries in order to reach engineers, scientists and meet the demands of expanding sophisticated markets (UNCTAD WIR, 2005). M&A bring the know-how, managerial expertise, resources to the target company. Accordingly, greenfield investment installs new equipment, brings technology and experience. Through the vertical and horizontal FDI spillovers the local market players may benefit as well as increase the economic growth. The empirical studies support this as well. For example, Xu and Zhong (2011) find positive FDI impact on economic growth in South Asian countries. Alfaro (2003) finds ambiguous effects of FDI on growth, as investments in primary sector make negative effect, FDI in manufacturing has positive one, and the evidence from service sector was not clear. Lipsey (2002) argues that results of positive spillovers on total factor productivity from foreign enterprises to local firms are mixed. But he also admits that overall productivity should improve from presence of foreign-owned operations. In the same article, Lipsey states that when a host economy is introduced with new products or new international industries due to presence of MNE, it benefits from being linked to world trading system. Therefore, productivity effects and development of new products should contribute to faster economic growth.

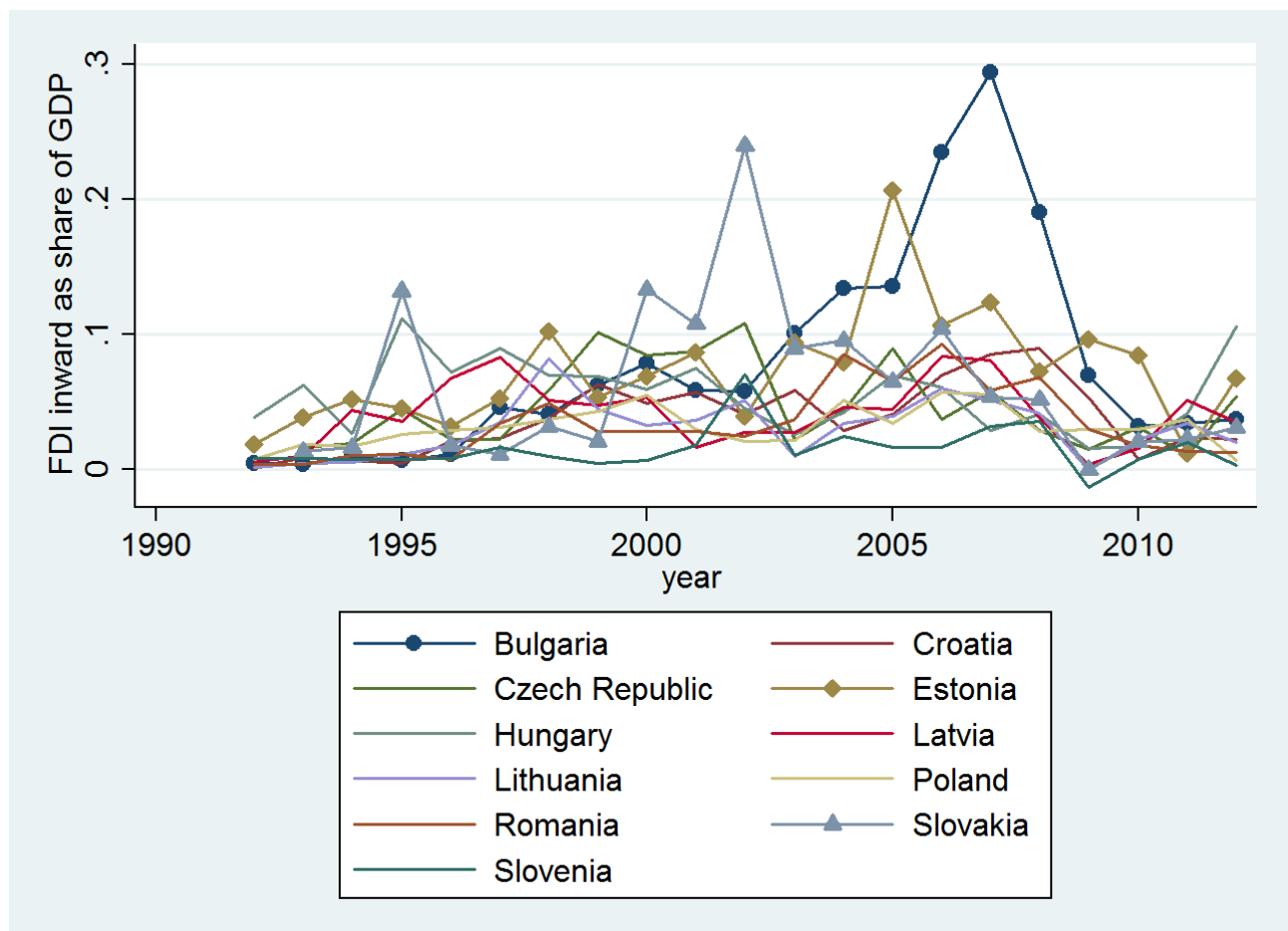
7. FDI and Economic Growth in CEE

As Görg and Greenaway (2003) state, FDI is a key driver of economic growth and economic development. CEE has been an attractive destination for the capital inflows since the EU enlargement in 2004, when this region outperformed Western Europe in terms of growth until the

global crisis. Today markets are recovering and the vision of East convergence towards West is again viable. For local CEE governments FDI has been one of priority goals.

An interesting fact, that today, unlike the most Western European MNE that are looking for opportunities investing in the Far East and Asia-Pacific region, Austria's majority of FDI goes to CEE (Richardson, 2012). Therefore, there is no surprise that Austria is called "gateway to CEE". At the same time, there can be a peculiar lack of "solidarity" by Western Europe enterprises seeking for the convergence. Although CEE is considered as one region, but the countries are diverse from cultural, historical, economic aspects: the growth, FDI attractiveness, MNE activities are not equal there. In future such diverse economic growth may divide CEE into sub-regions as Baltics (Estonia, Latvia, Lithuania), Central Europe (Czech Republic, Hungary, Slovakia, Slovenia), Southern and Eastern Europe (Bulgaria, Croatia) Poland and Romania may be addressed separately due to their size.

Figure 7.1: FDI in CEE, by country, 1992 - 2012



Source: UNCTAD

After collapse of planned economies in 1990 up to 2000 countries such as Czech Republic, Hungary, Poland, Slovakia and Slovenia implemented the so-called export-led strategy based on FDI and giving significant role for multinational corporations (Rugraff, 2008). In globalized world

MNE are key market players, that have strong networks and distribution channels, which are perfect for countries integration and success in international trade. Moreover, this strategy stimulated economic growth. The countries adopted flat-tax and financial incentives reducing corporate taxes, establishing industrial parks and free-tax zones. Also policies seemed to be more and more transparent, and friendly for FDI inflows. However, there were still some constrains on privatization and foreign labour restrictions. *Figure 7.1* indicates the basket of CEE countries, where Bulgaria (30 percent in 2006), Estonia (20 percent in 2005) and Slovakia (24 percent in 2002) stand out from the rest in terms of FDI inflows. At the beginning, industries in CEE were specializing in traditional areas such as food, clothing, manufacturing, but later countries decided to attract MNE producing high and medium technology products, which was a rational step.

On the other hand, such presence of foreign-owned enterprises in CEE did not create very high positive spillovers effects, as TNC very often acquired the best local companies, engaged in intra-TNC trade and did not interact much with local environment.

Looking at the motives why MNE invest in a particular country, Romania or Bulgaria are seemed, firstly, as countries, which offer cost advantages, whereas countries with a higher local purchasing power, better infrastructure and higher innovation level such as Poland, Czech Republic, Slovakia, Slovenia attract market, knowledge and technology seeking FDI. Moreover, markets access in CEE is associated with local purchasing power rather than the number of potential markets. Among Baltic states, Lithuania attracts most FDI in service sector and has its biggest market. Estonia is most attractive for stable financial and biotechnology sector MNE. Also it has understandable and simple tax policy, suitable for long-term investors. Latvia is distinguished for transparent legal system, for Russian and other CIS countries market knowledge, as well as having biggest capital in the region. However, it is quite difficult Baltics to compete with bigger countries such as Poland or Czech Republic, especially for inward horizontal FDI. For example, Germany as leading EU economy transferred some of its high-technical, automotive plants into these countries not only due to low cost, but as well as due to local market special features, which consist of knowledge, geographical location, infrastructure, and consumption. Also, Poland has been attractive destination for renewable and alternative energy FDI projects.

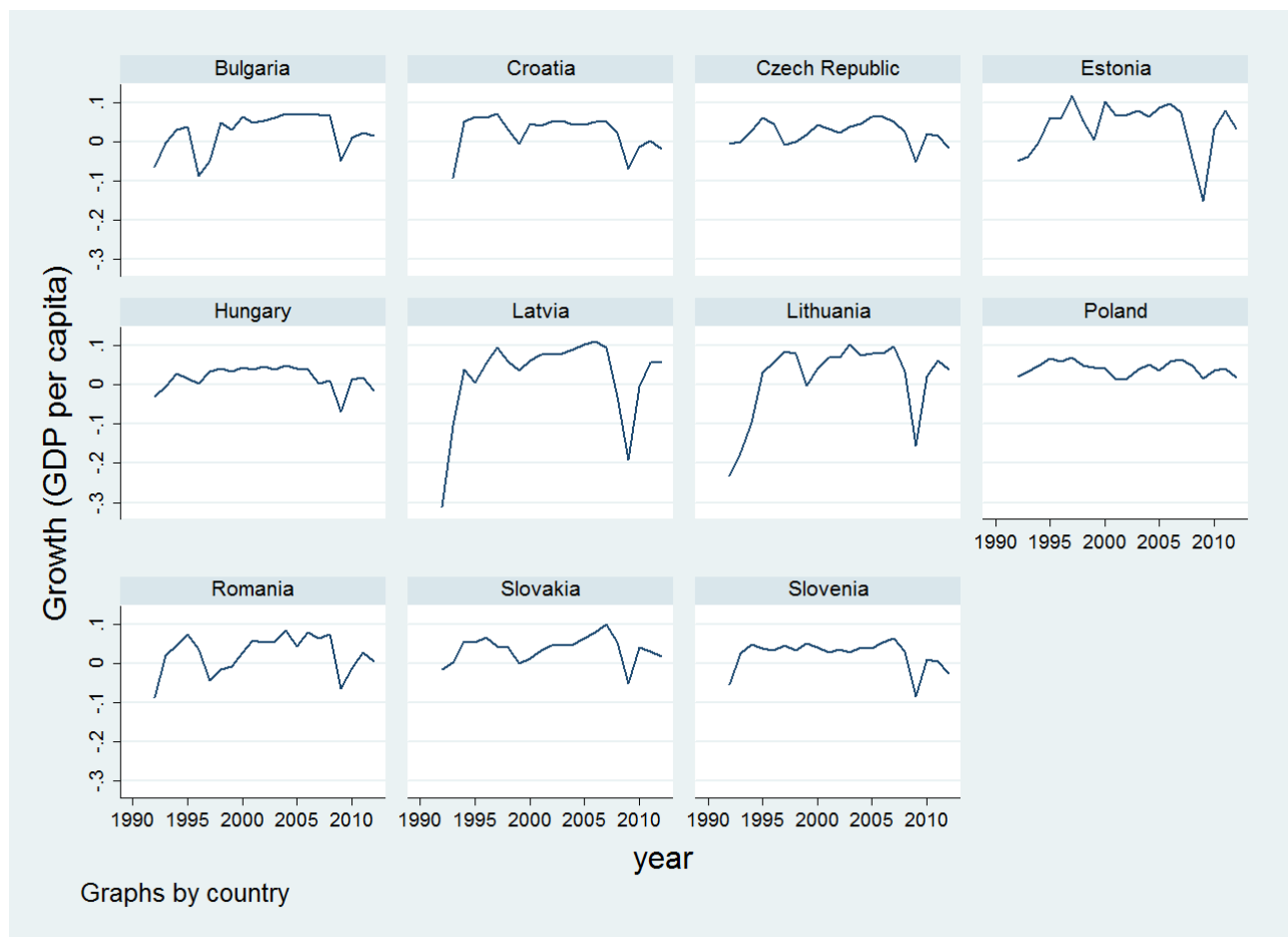
Even rising wages over last 20-year period in CEE did not affect negatively foreign investors' motives to stay in the market. Low costs and location advantages have still been strong motive to enter CEE. Additionally, localized knowledge and technology gradually became of high importance (Gauselmann, Knell and Stephan, 2011).

Together with the advent of crisis in 2008 CEE economy engine started to skid (*figure 7.2*). As growth was mainly driven by foreign investors from Western Europe, during the crisis the valve of inward FDI closed down that accordingly stopped growth and raised existing problems such as

institutional weaknesses, inadequate infrastructure and lack of innovation. However, regarding the latter factor, Hungary and Czech Republic together with Baltics are boosting high tech development and are already overtaking some western economies, whereas Poland, Romania and Bulgaria need to catch up. What is more, there might be unambiguous effects towards FDI due to public finance consolidation in terms of government debt and human capital issues such as migration, brain-drain and other demographic developments.

Several studies on the impact of FDI on economic growth in CEE have been done. Kornecki and Raghavan (2010) find strong evidence supporting positive effect of inward FDI on economic growth using production function. Vehorn and Vasarevic (2011) also find positive results. Their study shows that inward FDI together with domestic investment enhance CEE economic growth.

Figure 7.2: Growth in CEE, by country, 1992 - 2012



Source: World Development Indicators, World Bank

Eller, Haiss and Steiner (2006) analyse growth reasons through the financial sector FDI in CEE. They find that transactions in M&A make significant impact on growth only after two years of project implementation. What is more, FDI effect is higher as the weight of human capital stock is larger, as these two are closely related. Financial sector FDI is more efficient, when a foreign-owned bank faces strong local counterparts, for example, as it is in Hungary with local bank OTP,

and conversely it is not the case in Baltics, where Scandinavian banks are dominating the market. Generally, financial FDI has been very relevant at the initial stage of CEE development creating trustworthy, high standard and liquid environment for local and foreign businesses.

After all, CEE countries have greatly benefited from joining EU. Knowledge and technology transfer, restructuration in banking sector, financial integration, access to the markets, strong FDI inflows - all consequently influenced positive change in production and CEE performance. The region now is integrating very fast to Europe and, thanks to productivity gains, it should become the main European growth region, though even more diverse then it was before.

7.1 M&A and Greenfield Investment in CEE

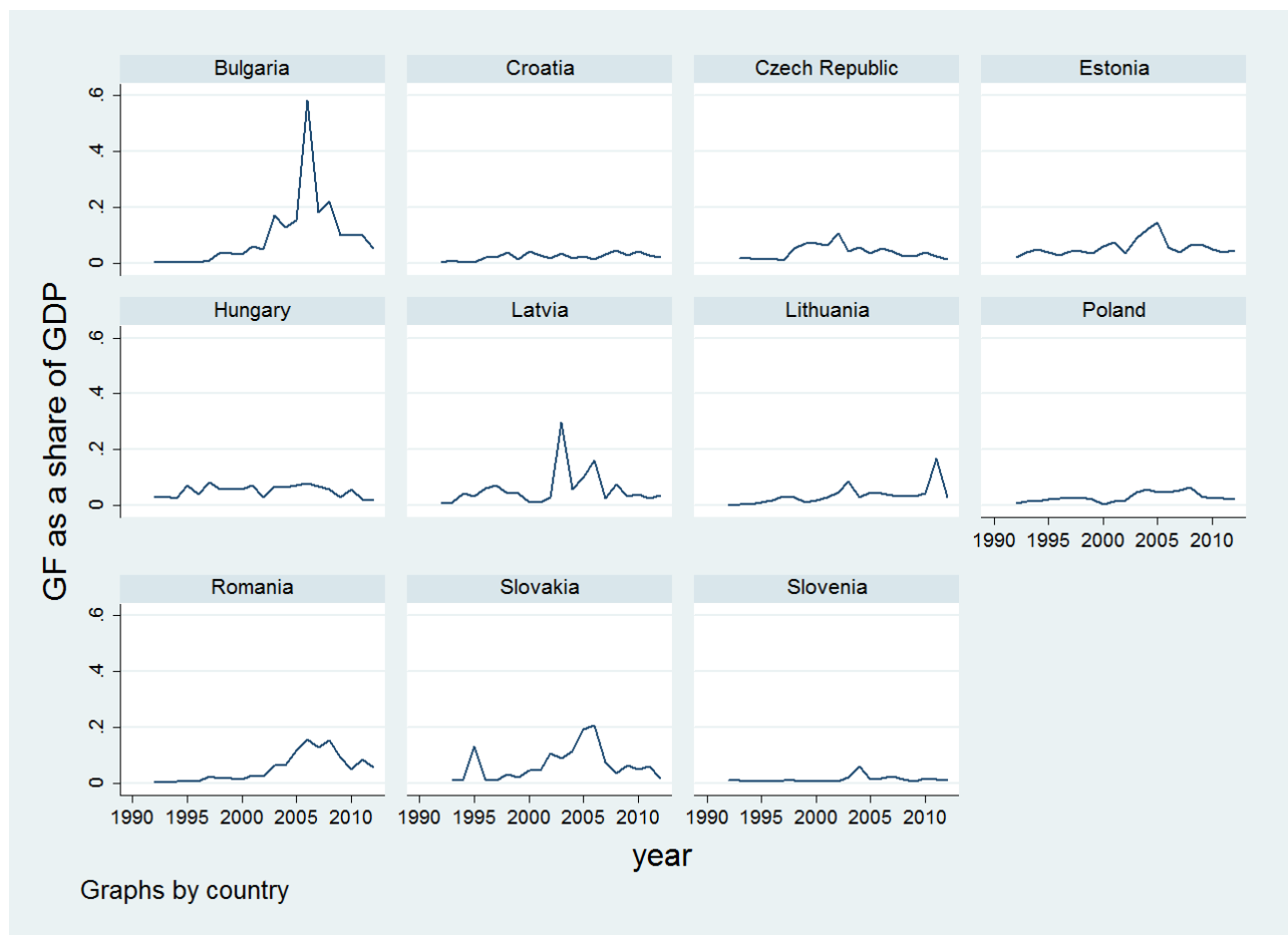
CEE markets have been open for both types of foreign market entry. During the transition period when most of countries adopted market economy, M&A were seen as cheaper way to enter the market. As massive privatization took place, firms could be acquired under the market price with all remaining previously state-owned capital. Also M&A were seen more profitable, but only in the short-run. Conversely, greenfield FDI was not so profitable in CEE in the first years after launching the project, but it showed stronger performance in the later stage of investment, after five to seven years. What is more, at the very beginning of 1990's M&A were short-term orientated in order to receive secured profits, but such profits were exceptions rather than a rule. Generally, M&A and greenfield investments in all CEE countries were not very profitable in early 1990's due to unfavorable macroeconomic and other specific conditions of that time, only later the situation changed. Comparing CEE greenfield investment with Western European investments, the share of reinvestments in CEE were much higher. Maybe this happened because of higher demand for restructuration and investments expansion. In meantime, M&A showed higher rates of repatriation compared to greenfield investment. Despite the privatization in its boom period or later around 2000's, MNE still faced high bureaucratic obstacles receiving full ownership, that could have pushed entities to be more in favor of greenfield investment. In the recent decade, host governments implemented more foreign-investors-friendly policies, profits stabilized (except global crisis period) and investors' presence time increased.

Table 7.3 shows that not all countries faced significant surge in greenfield FDI. Bulgaria profited from foreign capital inflows particularly in 2006, Slovakia in 1995 and 2005, the Czech Republic, Lithuania and Slovenia in 2004, Latvia in 2003 and 2006, Estonia in 2005, and Romania in 2005-2008. Hungary, Poland, Slovenia, and Croatia received quite stable inflows without distortive deviations. Looking at the M&A share of host country's GDP, less persistence then in greenfield

FDI is observed (figure 7.5). Almost all countries demonstrate surge in deals in the period 1997 – 2004. In the other figure (figure 7.4) we can see that M&A deal values in 2004 – 2007 and 2009 – 2012 were higher than greenfield. But in the whole picture (figure 7.6) we see clearly that in the period 2003 -2012 greenfield investment dominated M&A in CEE, outnumbering in the number of projects 13015 to 1772 and total value 531 million US dollars to 142 million for that period, making greenfield investment the most popular way of entering CEE. Based on facts and evidence from figures below, it is reasonable to assume greenfield investment is more resistant to economic downturns than M&A activities, which tend to correlate with business cycles. Interestingly, when considering MNE motives to enter CEE markets under particular method, very high and very low competition makes better conditions for greenfield entry, while intermediate level of competition in particular sector or industry is preferable for M&A entry (Müller, 2000).

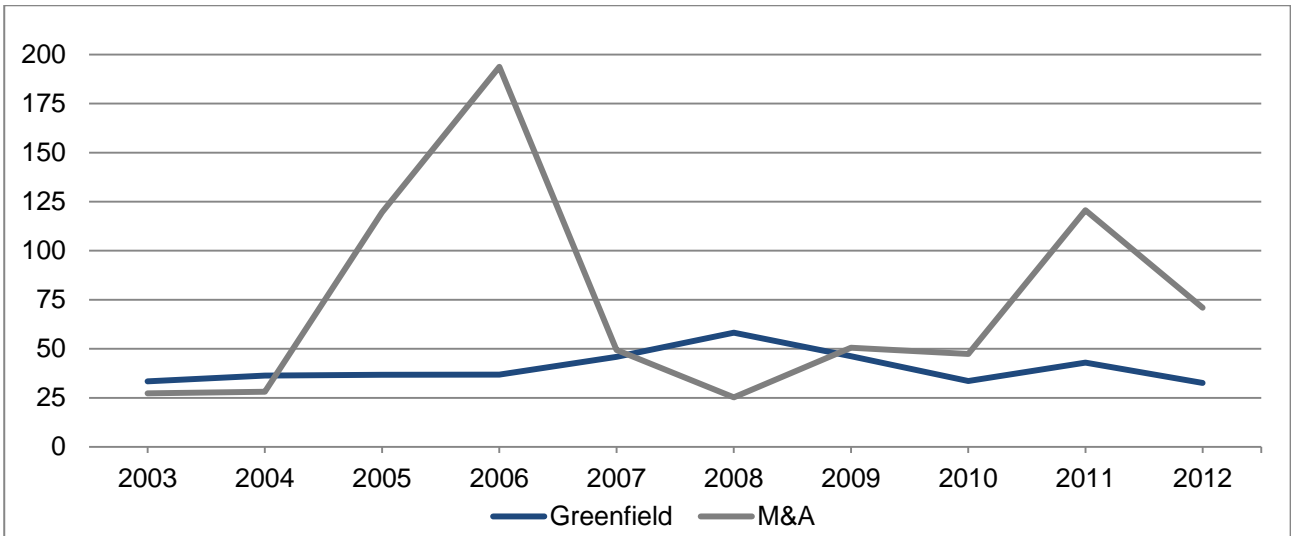
Looking to more recent years, sectors such as manufacturing, services, finance and insurance, wholesale and retail trade, and telecoms and IT attracted the most MNE in CEE host economies.

Figure 7.3: Greenfield Investment in CEE, by country, 1992 – 2012



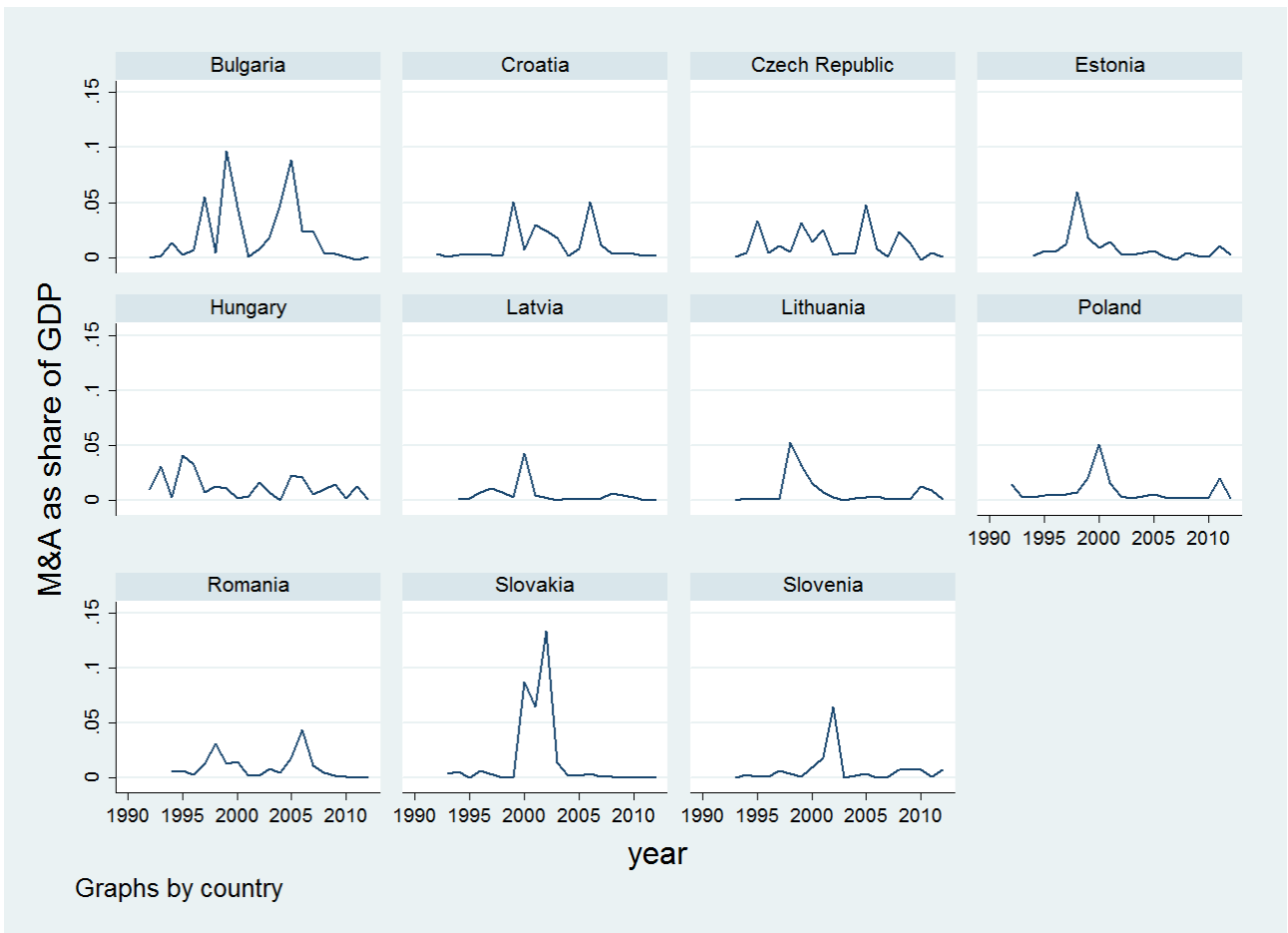
Source: UNCTAD

Figure 7.4: Average Value of Greenfield Project vs M&A Deal in CEE, 2003 - 2012 (millions of USD)



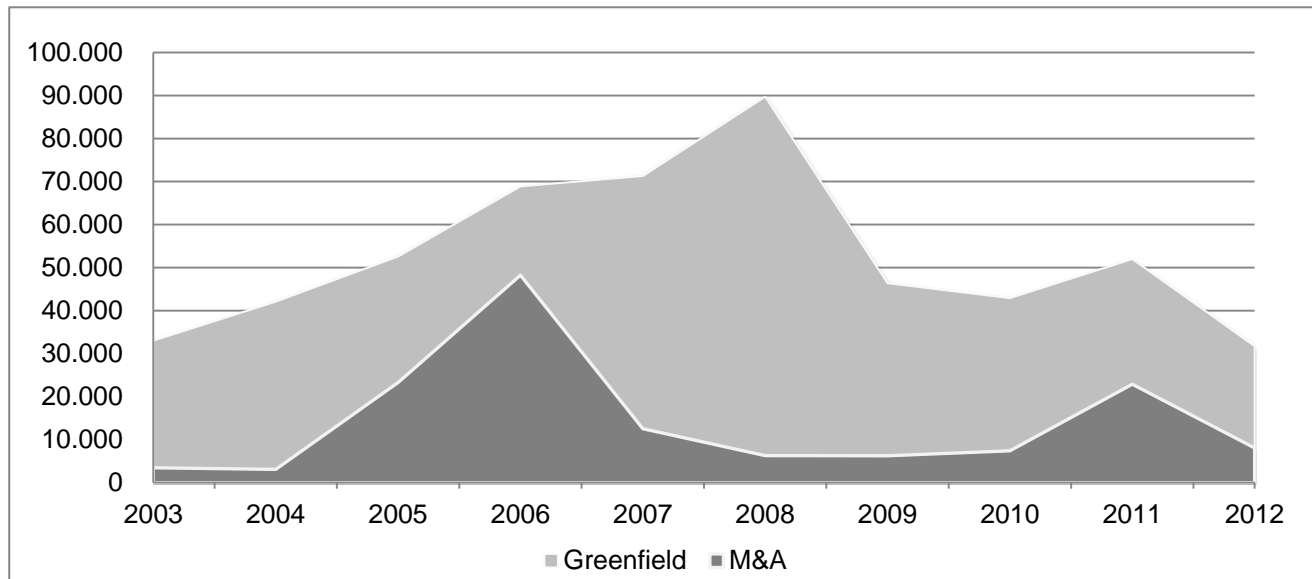
Source: UNCTAD

Figure 7.5: M&A in CEE, by country, 1992 – 2012



Source: UNCTAD

Figure 7.6: Greenfield Investment and cross-border M&A in CEE, total, 2003 - 2012 (millions of USD)



Source: UNCTAD

8. Evidence from Previous Research

Analysis on FDI impact on economic growth was quite popular in last couple of decades due to relevance of the topic, especially in emerging, developing countries. However, there were not so many scholars trying to make deeper cut into FDI and split it into M&A and greenfield investment. For example, UNCTAD started to collect aggregated annual information on M&A sales and purchases from 1992, whilst the information on greenfield - just from 2003. No surprise, that there was such limited number of researches. I contacted Austrian Central Bank trying to find out if they have information on FDI split into different modes and they answered *no*, but they are planning to collect it because of its increasing relevance. Today also global financial media distinguish between these two modes.

I found few studies about M&A and greenfield effect on economic growth, but none of them analyzed growth in CEE. Calderon, Loayza, and Servén (2004) analyze inward FDI and its components for the period 1987 – 2001. They find that neither in developed nor in developing countries M&A and greenfield investment contribute to the economic growth. Contrary, they do find positive correlation between aggregated FDI the growth. In addition to this, scholars discover that both types of FDI in industrial and developing countries lead to domestic investment, but reverse does not hold. Also their study shows that large M&A are followed by greenfield investments, but not *vice versa*. Wang and Wong (2009) in the same period find greenfield investment effect significant and positive on the growth, while M&A negative. However, in order

M&A impact to be positive, host country should have sufficient human capital level. Also they argue about uncertainty in FDI, relation between FDI and the growth, due to offsetting growth effects between M&A and greenfield investment. Another group of researchers from Portugal, Neto, Brandão and Cerqueira (2010) investigate same question for the period of 1996 – 2006. Their estimation demonstrates that FDI through greenfield investment has positive effect on growth both in developed and developing countries, while FDI through M&A have negative impact on the economic growth in developing countries and insignificant effect in developed economies.

9. Empirical Specification

FDI is related to physical as well as intangible assets transfer to a host country. Consequently, as theory suggests, there should be a positive impact on economic growth. However, it very often happens that what theory states that is not always the same as an empirical outcome. In the thesis I stress out FDI's two main approaches- cross-border M&A and greenfield investment - impact on economic growth. But before doing this, I check general FDI effect on the growth in CEE.

The research part follows closely Wang and Wong (2009) paper, which is derived from Borensztein (1998), in order to work with already proved method and problem. As a starting point, I use following regression with the panel data:

$$Growth_{it} = \alpha + \beta FDI_{it} + \delta H_{it} + \gamma (FDI_{it} \times H_{it}) + Z_{it} B_z + \epsilon_{it} \quad (1)$$

here *Growth* is measured as per capita real GDP growth in country *i* at time *t* and FDI is taken as *total inward* in a host country. Additionally, I add human capital *H* which is expressed as average years of secondary schooling in population over 25 years old⁹. The interaction between human capital and FDI is used to investigate if there is any threshold level in education in order for FDI to be significant. Vector *Z* consist of inflation, population growth, government expenditures, trade openness, and spending on R&D; these are important variables controlling for growth.

M&A and greenfield investment are different in their nature, therefore I expect they should have different effects too. Greenfield investment involves new capital assets, where M&A is just transfer of them. By the same token, it makes sense that the former should have a greater impact on economic growth than the latter (Calderon, Loayza, and Serven, 2004).

⁹ For more information, visit The Barro-Lee Data: <http://www.barrolee.com>

For the further deeper investigation cutting of different foreign market entry modes, I employ second regression where FDI is substituted for M&A and greenfield investment:

$$Growth_{it} = \alpha' + \beta'_{GF} GF_{it} + \beta'_{MA} MA_{it} + \delta H_{it} + \gamma'_{GF \times H} (GF_{it} \times H_{it}) + \gamma'_{MA \times H} (MA_{it} \times H_{it}) + Z_{it} B'_z + \epsilon_{it} \quad (2)$$

Empirical part applies simple OLS regression and introduces the dummy variable for Euro currency to see if there is any link there, because some of countries have Euro, others are planning, whereas third part do not relate their close future with the European Monetary System. Further I introduce fixed effects to check for unobserved heterogeneity among countries. As a third step I undertake the endogeneity issue applying Sargan test¹⁰ to check the validity of the instruments and Durbin–Wu–Hausman test¹¹ for endogeneity bias.

10. Data Description

The greatest part of the data is collected from the Word Bank (WB) and United Nations (UN) resources. The depended variable in the regressions is *per capita real GDP growth*, expressed as a log difference in a host economy. *Inflation* is calculated as a log difference from consumer price index (CPI). These two variables together with *domestic investment* as a share of GDP are from WB World Development Indicator database. *Population growth* and *human capital* are from WB Education Statistics. The latter indicating an education attainment should be a sensitive factor dealing with FDI, because a country, which is abundant in well-educated human resources, eases absorption of advanced technology (Barro and Lee, 1993). The information on *FDI*, *M&A*, *Trade openness*, and *Government expenditure* are from UNCTAD database. The statistics on greenfield is combined of UNCTAD and Financial Times Ltd (fDi Markets) information. Furthermore, the figures about greenfield investment are shown only from 2003. For the missing period I calculate greenfield value by taking the difference between inward FDI and M&A¹². In my calculations FDI is defined as total inward FDI, M&A is M&A sales in a host country, greenfield represents value of greenfield by destination, trade openness is total imports and exports accumulation. All these variables are expressed as a share of GDP. Total *R&D* spending is taken from Eurostat database and

¹⁰ For more information: <http://economics.about.com/od/economicsglossary/g/sargantest.htm>

¹¹ For further information: http://en.wikipedia.org/wiki/Hausman_test

¹² Actually inward FDI is accumulated from greenfield investment, M&A sales, re-investments, and disinvestments; In the absence of appropriate statistics analysts consider greenfield investment and M&A as main parts of FDI (2004, Bertrand).

it is also used as a share of GDP. Regarding the instrumental variables part, the information on *country income group* and *land size* is from WB; in the model land size is taken as logged value. The sample consists of 11 countries; the period takes from 1992 to 2012. The data is aggregated and annual. Currency is expressed in US dollars, because WB and UNCTAD databases mainly maintain information expressed in this currency.

11. Empirical Results

The statistical results show (*table 11.1*) an average growth in CEE of 2,6 percent during the given period, whereas the highest peak was 11,7 percent. We can see that greenfield investment has a very big share in FDI comparing to M&A sales value, which is only 1,1 percent of total GDP, whereas FDI creates roughly 6 percent of GDP on average. Inflation mean hit 16,3 percent, but I would like to note that main inflation deviations were at the beginning of 1990's, when CEE countries experienced significant historical changes. Trade openness plays an important role in the region, where share of total imports and exports in a host country economy on average is equal size as GDP plus one tenth of it.

Table 11.1: Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Growth	230	0,0267	0,0564	-0,3118	0,1170
FDI	229	0,0606	0,0621	0,0012	0,6062
Greenfield	229	0,0472	0,0564	0,0012	0,5819
M&A	212	0,0112	0,0186	-0,0026	0,1340
Schooling	231	2,9300	1,0433	1,2400	5,1100
Inflation	224	0,1630	0,3479	-0,0115	2,7726
Gov. Expenditure	231	0,3449	0,1130	0,0000	0,7880
Population Growth	231	-0,4010	0,7548	-3,8202	3,7326
Trade Openness	230	1,1053	0,3274	0,4105	1,8592
R&D Spending	201	0,0673	0,4032	-3,2947	1,0144

At the beginning I run multiple regressions in with OLS method, where growth is dependent variable. However, the suspiciousness and intuition pushed me towards individual assumptions on countries, which could be found by random effects or fixed effects models using panel data. In order to find out which of them to apply, I perform Hausman test , where the null hypothesis states that the random effects are preferred to fixed effects, or in other words, the unique errors do not correlate with independent variables. In my case I reject the null due to low p-value and continue to work with fixed effects. This model enables to take into account causes of changes within countries.

As something happens within country, this may influence or bias predictor or outcome values, using fixed effects we can control for this. Hence, when applying fixed effects and adding more regressors, I receive better results in comparison to regressions made under OLS method.

Analyzing FDI impact on economic growth first regression (1.1; *table 11.2*) shows strong foreign investment effect on host countries economy growth. However, adding more variables, the impact loses its robustness. Though, in regressions 1.2-1.3 coefficients are negative and insignificant. In the last two regressions 1.4-1.5, where I add trade openness, spending on R&D as well as Euro dummy, FDI turns to significant negative result, showing that an increase in FDI by 1 percent may lead to decrease in growth by 0,10 - 0,11 percent. Also, having Euro appeared to have negative impact on growth. Interesting that interaction between FDI and average years of secondary schooling remains positive and significant in all five regressions ranging from 0,09 to 0,14 percent.

Table 11.2: FDI Impact on Economic Growth in CEE

Regression No.	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)
FDI	0,2639*** (0,0789)	-0,1022 (0,1325)	-0,1985 (0,1305)	-0,1187** (0,0517)	-0,1084* (0,0569)
Schooling	0,0113 (0,0087)	0,0018 (0,0083)	-0,0238*** (0,0066)	-0,0477*** (0,0123)	-0,0425*** (0,0113)
FDI*Schooling		0,1498** (0,0637)	0,1480** (0,0528)	0,1019*** (0,0187)	0,0906*** (0,0205)
Inflation			-0,0826** (0,0293)	-0,0474*** (0,0085)	-0,0470*** (0,0088)
Gov. Expenditure			-0,0167 (0,0403)	-0,0933 (0,0587)	-0,1048 (0,0583)
Population Growth			0,0068 (0,0070)	0,0037 (0,0109)	0,0057 (0,0114)
Trade Openness				0,0740** (0,0322)	0,0802** (0,0330)
R&D Spending				0,0360*** (0,0100)	0,0362*** (0,0101)
Euro					-0,0295* (0,0139)
Constant	-0,0222 (0,0265)	0,0008 (0,0236)	0,1059*** (0,0277)	0,1197*** (0,0217)	0,1052*** (0,0166)
No. of Obs.	228	228	223	201	201
R-squared	0,0936	0,1157	0,2675	0,2913	0,3080

Note: Robust Standard Errors are in the parentheses

* $p < .1$; ** $p < .05$; *** $p < .01$

Table 11.3 presents results from M&A and greenfield investment. Regression 2.1 from the equation 2 indicates positive and significant influence of greenfield FDI on economic growth in CEE. But later the same ambiguousness appears as for FDI when adding more variables into regression. Conversely, M&A show mixed positive and negative impact but not significant. These poor results

might be caused by generally low value of M&A in CEE compared to its counterpart greenfield investment. Another reason explaining different impact of M&A and greenfield is that the latter creates new job positions and increases level of competitiveness, whereas the former is related with change in ownership, as I have already mentioned before. The interaction between greenfield and schooling shows positive and significant influence on growth (regressions 2.1-2.5), where M&A interaction with human capital is significant and positive in only one regression 2.2, though remains positive for the rest ones. Here results with positive sign and low p-value show about potential technology adaptation. As we can see, this process is far better performed when foreign investment takes form of greenfield, ranging from 0,08 to 0,10 percent. Furthermore, these results indicate that in order for FDI, M&A, greenfield to be successful, there should be certain threshold of average school attainment. On the other hand, insignificant interaction numbers, such as in M&A 2.3-2.5 may suggest for the absence of spillovers diffused by human capital.

Table 11.3: Greenfield FDI and M&A Impacts on Economic Growth in CEE

Regression No.	(2.1)	(2.2)	(2.3)	(2.4)	(2.5)
Greenfield	0,2334*** (0,0484)	0,0342 (0,0781)	-0,1023 (0,0882)	-0,1073* (0,0581)	-0,1012 (0,0616)
M&A	0,172 (0,1165)	-0,316 (0,3537)	-0,1801 (0,4894)	0,0905 (0,2962)	0,1057 (0,2818)
Schooling	-0,0031 (0,0052)	-0,0073* (0,0040)	-0,0190** (0,0068)	-0,0408*** (0,0095)	-0,0373*** (0,0089)
Greenfield*Schooling		0,0815* (0,0394)	0,1077** (0,0361)	0,0927*** (0,0161)	0,0850*** (0,0184)
M&A*Schooling		0,2079* (0,1104)	0,1385 (0,1491)	0,0484 (0,1197)	0,0355 (0,1144)
Inflation			-0,0619*** (0,0187)	-0,0446*** (0,0066)	-0,0438*** (0,0063)
Gov. Expenditure			-0,0347 (0,0472)	-0,1047 (0,0698)	-0,1141 (0,0699)
Population Growth			0,0013 (0,0044)	0,0065 (0,0115)	0,0079 (0,0123)
Trade Openness				0,0696** (0,0290)	0,0757** (0,0301)
R&D Spending				0,0383** (0,0172)	0,0386* (0,0173)
Euro					-0,0263 (0,0183)
Constant	0,0280* (0,0154)	0,0376** (0,0129)	0,0969*** (0,0273)	0,1096*** (0,0226)	0,0986*** (0,0171)
No. of Obs.	211	211	209	190	190
R-squared	0,0747	0,0865	0,2128	0,2605	0,2733

Note: Robust Standard Errors are in the parentheses

* $p < .1$; ** $p < .05$; *** $p < .01$

11.1 Robustness Check

The growth can be influenced by many factors. When talking about investing foreign MNE, we should not forget about domestic investment as it also accumulates capital, which consequently may influence the growth of GDP. I decided to check M&A and greenfield effects robustness by adding domestic investment to regressions 3.1-3.5 in *table 11.4*. As we can see from the table, domestic investment stays influential, starting with significance level under 10 percent in 3.3 regression to significance level under 1 percent in 3.4, making biggest positive impact from all regressions of 0,18 percent.

Table 11.4: Greenfield FDI and M&A Impacts on Economic Growth in CEE; with Domestic Investment

Regression No.	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)
Greenfield	0,1915*** (0,0542)	-0,0269 (0,0814)	-0,1425 (0,0918)	-0,1593** (0,0559)	-0,1535** (0,0574)
M&A	0,1195 (0,1395)	-0,359 (0,4571)	-0,225 (0,5695)	0,0168 (0,3347)	0,0277 (0,3232)
Domestic Investment	0,1455** (0,0545)	0,1471** (0,0541)	0,1073* (0,0553)	0,1807*** (0,0544)	0,1686** (0,0609)
Schooling	-0,0031 (0,0062)	-0,0076 (0,0047)	-0,0187** (0,0075)	-0,0400*** (0,0122)	-0,0387*** (0,0121)
Greenfield*Schooling		0,0893* (0,0439)	0,1130** (0,0400)	0,0935*** (0,0172)	0,0904*** (0,0175)
M&A*Schooling		0,2045 (0,1403)	0,1423 (0,1702)	0,0554 (0,1227)	0,0498 (0,1199)
Inflation			-0,0585** (0,0198)	-0,0357*** (0,0073)	-0,0360*** (0,0074)
Gov. Expenditure			-0,0347 (0,0445)	-0,1101 (0,0614)	-0,1135 (0,0630)
Population Growth			0,0008 (0,0041)	0,0053 (0,0096)	0,0059 (0,0101)
Trade Openness				0,0775** (0,0316)	0,0794** (0,0322)
R&D Spending				0,0361* (0,0164)	0,0364* (0,0166)
Euro					-0,0105 (0,0145)
Constant	-0,0035 (0,0160)	0,0066 (0,0141)	0,0719* (0,0329)	0,0599* (0,0320)	0,0588* (0,0305)
No. of Obs.	210	210	208	190	189
R-squared	0,1022	0,1153	0,2286	0,3093	0,3111

Note: Robust Standard Errors are in the parentheses

* $p < .1$; ** $p < .05$; *** $p < .01$

When I include domestic investment, greenfield effect stays robust in first regression (p-value under 1 percent), where one percent increase in greenfield FDI leads to 0,19 percentage points increase in economic growth. However, regressions 3.4-3.5 indicate greenfield comes up with significantly (p-value under 5 percent) negative values. Looking at the interaction between greenfield and schooling, and adding domestic investment, it increases from 0,08 (in 2.5) to 0,09 (in 3.5), where significance level stays the same. Contrarily, during the robustness check, M&A and schooling interaction lost significance, but remains positive.

11.2 Endogeneity Question

The endogeneity issue very often comes to the daylight when explaining growth dynamics caused by particular factor, as independent variable coefficient may correlate with an error term. Accordingly, the biasness could distort the whole picture of empirical results. In my research, I analyze foreign TNC investment in CEE and its impact on the growth. However, there could be an opposite relation too, where the economic growth may impact activity of FDI. Higher growth and brighter future perspectives could attract foreign investors looking for new markets and profit opportunities. In CEE greenfield investment strongly dominates over M&A, thus I concentrated towards greenfield investment and made an intuitive assumption that greenfield investment could be endogenous.

Following that, I approach instrumental variables (IV) estimation, whereas as instruments are chosen log value of land size and country dummy - representing different income categories classified by the World Bank. To pick up comprehensive instrumental variables may be a very challenging task. Accordingly, I decided to rely on the previous studies. The variables were chosen under the reference of Wang and Wong (2009), who follow Borensztein (1998), as they strongly correlate with greenfield investment but not with error term. Hence, from theory point of view, these properties sounded suitable for the IV estimation.

Firstly I applied Sargan test to check instrumental variables validity. It showed promising results, and variables “passed the test” (p-values of regressions ranging 0,3503 – 0,6676; the null hypothesis: instruments are healthy). Afterwards, knowing that Sargan test gave me a “green light”, I performed the Durbin–Wu–Hausman endogeneity bias test. It showed very high p-values, stating that greenfield investment is exogenous variable (p-values of regressions ranging 0,3637- 0, 9323, the null hypothesis: variable is exogenous). Additionally, executed IV model with two-stage least-squares regression for greenfield investment showed very insignificant results in all five regressions. Despite the results, there may still exist a potential endogeneity problem. Also there is

no guarantee if taken instruments are really suitable for the analysis, even though they appeared to be valid. Economic growth is a very wide topic and probably has bidirectional effects with FDI.

11.3 Summing Up

Using helicopter view, the empirical outcome shows very ambiguous results regarding greenfield and M&A impact on economic growth in CEE. As expected, these two different modes have different effects and greenfield investment shows higher significance than M&A. Simultaneously, greenfield investment alone is not persistent in showing positive impact in all regressions. When I regress growth on greenfield, M&A, and human capital - the coefficient (*greenfield*) is positive, but later adding more control variables, it turns out to be negative. The robustness check introducing domestic investment indicates an increase in greenfield investment importance and decrease of M&A interaction with schooling. Overall, ignoring mixed outcomes, there is positive and consistent trend of the interaction between greenfield investment and human capital, indicating that this type of foreign direct investment does have relevant influence on host country economy when certain level of average years of secondary schooling is reached. That is well explained by greenfield FDI relation with technology transfer and demand for high-skilled or at least eager to absorb specific technology-related knowledge labour.

12. Concluding Remarks

FDI has been very important factor in CEE economies since the beginning of 1990's causing highest interest of scholars and policy makers. The countries faced significant changes in transition period and growth boost after joining the EU. Their governments have been continuously pursuing FDI-friendly policies creating better environment for foreign businesses. There was a positive linkage between MNE presence and countries surge in the performance drawn. The transfer of foreign capital and knowledge has greatly contributed towards CEE development, making the region attractive destination for investors' actions in Europe and wider operations using CEE as the export platform.

While most research has been done on *total inward* FDI and its impact on per capita real GDP growth, I took a different approach cutting deeper into the substance of FDI. Also, other than previous analysis, I limited geography to CEE only, as specific Europe region with high growth potential and opportune for foreign investments. Greenfield foreign direct investment and cross-

border M&A are the two main modes of entering foreign market. As they are different in nature, I expected their effect on the growth in CEE to be diverse too, because greenfield investment is related with establishing a new company, creating new jobs places, longer investors' presence, whereas M&A have other characteristics, such as change in ownership, restructuring, and cultural issues. Regardless of global downturn in manufacturing and services, CEE market benefited largely from greenfield investments in manufacturing, and M&A in finance and insurance, wholesale together with retail trade, as well as telecommunications and IT.

From the theoretical point of view, both M&A and greenfield investment brought positive effects to CEE. The transfer of modern technology, telecommunications, and managerial experience contributed to business performance and hence national income. Foreign inward investments in banking, advisory, auditing prepared a good soil for TNC coming to CEE. M&A targeted to the intermediate competition industries, whereas greenfield investment – to highly or very lowly competitive regions and sectors. Furthermore, M&A and greenfield investments' positive externalities diffusing from MNE activities offset negative ones and also contributed to economic growth in CEE, as local companies advantage from cooperation and workforce benefit from skills improvement. Overall, both entry modes gave a credit on the markets, improved competition level and “advertised” regions globally through sales operations.

Empirical part gives miscellaneous outcomes on M&A and greenfield effect on economic growth in CEE. When regressing growth with FDI, greenfield, and M&A alone, first two regressions show positive impact, though M&A lacks significance. But when adding more regressors, results become mixed, even significantly negative. Obviously, FDI and greenfield results are very similar, because greenfield investment counts for approximately 80 percent of FDI made in CEE. Also the region is not the most popular in terms of mega M&A deals, in contrast to more advanced or bigger countries (e.g. US, Japan, UK, and Russia). This may influence poor M&A empirical results. Interestingly, human capital plays important role for greenfield and less important - for M&A. As countries in CEE reach certain threshold of education, interaction between schooling and greenfield implies robust positive effect on economic growth, what gives promising tone for the research.

To sum up, theory suggests positive effect of M&A and greenfield investment on economic growth in CEE. As very often only most productive firms engage in foreign activities, this indicates CEE received proper quality foreign tangible and intangible capital injections. The empirical results are ambiguous, where unobserved variables may influence the impact. But there is encouraging fact about positive relation between M&A and greenfield interaction with human capital, which cause positive effects on growth in CEE. After all discussed in the paper, I am confident about influence of M&A and greenfield positive externalities on the economic growth in CEE. Of course, for more persuasive empirical results further studies would be needed.

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Appendix A: List of Abbreviations

CEE – Central and Eastern Europe

ERM - Exchange Rate Mechanism

EU – European Union

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

GIMT – Global Investment Trend Monitor

M&A – Mergers and Acquisitions

MNE – Multinational Enterprise

OECD - Organization for Economic Co-operation and Development

TNC – Transnational Corporation

UNCTAD - United Nations Conference on Trade and Development

USD – United States Dollar

WB – World Bank

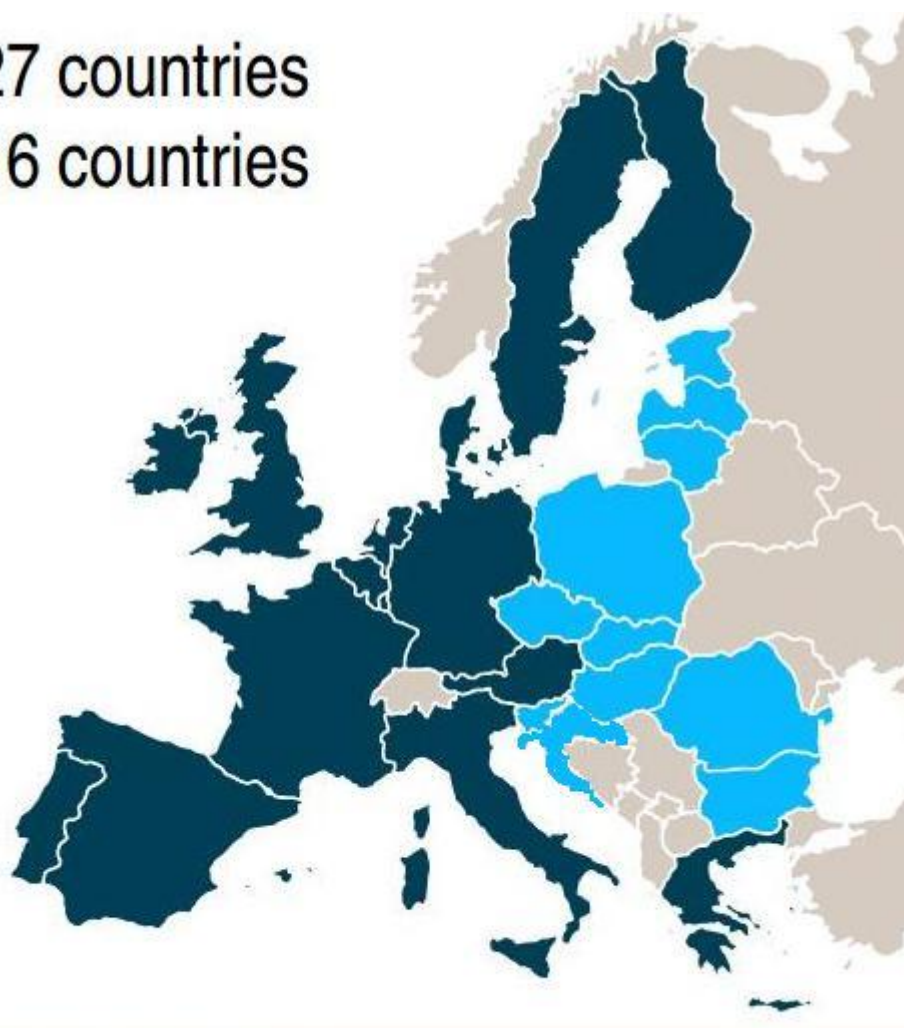
WIR – World Investment Report

Appendix B: CEE Map

CEE Map (*New EU Member States*)

EU: 27 countries

Euro: 16 countries



■ EU-15 ■ New EU member states

Appendix C: List of Industries/Sectors by UNCTAD

Primary

Agriculture, hunting, forestry and fisheries

Mining, quarrying and petroleum

Manufacturing

Food, beverages and tobacco

Textiles, clothing and leather

Wood and wood products

Publishing and printing

Coke, petroleum products and nuclear fuel

Chemicals and chemical products

Rubber and plastic products

Non-metallic mineral products

Metals and metal products

Machinery and equipment

Electrical and electronic equipment

Precision instruments

Motor vehicles and other transport equipment

Other manufacturing

Services

Electricity, gas and water

Construction

Trade

Hotels and restaurants

Transport, storage and communications

Finance

Business services

Education

Health and social services

Community, social and personal service activities

Other services

Appendix D: CEE Growth rates, 1992-2012

