# Greenfield vs. Acquisition in FDI: Evidence from Romania

**Nicolae Marinescu, Cristinel Constantin**

Transilvania University of Braşov[1]

10th ETSG Annual Conference - Warsaw

September 2008

**Abstract**

This paper studies the comparison between greenfields and acquisitions as foreign direct investment (FDI) alternatives used by transnational corporations (TNCs). First, the determinants leading to the choice of companies between the two modes of entry into a foreign market are laid out. Then, we highlight the specific features of each alternative, contrasting their advantages and disadvantages. The analysis continues with the implications of greenfields and acquisitions on host countries, with a special focus on the situation of transition countries, where most of the acquisitions occurred within the privatization process. The comparison between the two types of FDI is then applied to the particular case of Romania. By means of statistical data, we show the recent distribution of FDI flows on acquisitions and greenfield projects, as well as their evolution over the last few years. Subsequently, we use the Top 100 largest companies in Romania ranked by turnover, to determine with the help of a multiple correspondence analysis the relations of association between the two types of FDI and specific characteristics of the foreign affiliates in the panel, such as: turnover, profit margin, industry, home country of the TNC and location in Romania. Based on the obtained results, we are able to draw some conclusions concerning the main features of greenfields vs. acquisitions in FDI flows to Romania.

Keywords: FDI, greenfield, acquisition, TNCs, Romania

JEL classification: F21, F23

[1] Transilvania University of Brasov, Faculty of Economic Sciences, 29 Eroilor Bd., 500036 Brasov, Romania, Tel:+40.722.533.912, Fax:+40.268.473.473, marinescu@unitbv.ro, cristinel.constantin@unitbv.ro

## 1. Determinants for the Choice between Greenfield and Acquisition

There is a lot of literature concerning FDI as an alternative of entering markets, as opposed to exporting or licensing. Fewer studies focus particularly on the comparison between the two main types of FDI, namely greenfields and acquisitions (for the sake of simplicity, we will incorporate mergers in the "acquisition" term, their number being insignificant within the category on international level and especially in transition countries). In-depth research of this comparison was undertaken by Caves and Mehra (1986), Kogut and Singh (1988), Svensson (1998) and Harzing (1999). A comprehensive guide dedicated to the similarities and differences between greenfields and acquisitions is the 2000 World Investment Report by UNCTAD, issued in the peak year of worldwide FDI until that time. More recent studies that have dealt with this matter are those of Meyer (2001), Meyer and Estrin (2001), Nisbet et al. (2003), Grunfeld and Sanna-Randaccio (2005), Balsvik and Haller (2005).

Quantitatively speaking, the last years saw a dominance of acquisitions in worldwide FDI as opposed to greenfields. During the 1990s, acquisitions became a widely used mode of TNC entry and expansion in virtually all industries. Indeed, they drove the FDI boom during the second half of the 1990s. But it was in services that most acquisitions took place, e.g. banking, basic telecommunications, electricity and water (UNCTAD, 2004). Global FDI flows amounted in 2006 to $1,306 billion, driven by increased cross-border acquisitions that reached $880 billion (UNCTAD, 2007) but also by more greenfields, which made up almost 33% of total FDI in comparison to 22% the previous year. Over the last decade, the growth in international production has been via cross-border acquisitions rather than greenfield investment (UNCTAD, 2000). The explanations for the surge of acquisitions are to be found in the changes occurred in the global context, including the fierce international competition, triggered by excess capacity in many industries and the strategic posture taken by oligopolies. Companies looked beyond frontiers to acquire targets also due to the technological gap, poor sales of local firms, improvement of human capital in many countries, as well as a part of the desire to expand easier on the European single market or other regional trading blocks.

There are several determinants for the decision between a greenfield investment and a acquisition. Harzing (1999) has identified a number of firm-specific, host-country specific and industry-specific-factors that affect the choice of entry mode into foreign markets. Some of them will be discussed below.

Concerning firm-specific factors, one of the important drivers to initiate a greenfield or a acquisition are naturally the costs implied and the expected post-entry profits. A greenfield bears important bureaucracy costs, the process of acquiring real estate can be very slow, but if it is a pioneering investment, profits will be consistent. Even if traditionally perceived to be lower, Grunfeld and Sanna-Randaccio (2005) show that acquisition costs can be also surprisingly high, leading to low profits from acquisitions. Another essential factor is the speed of implementation. The setting up of a new production facility is not only costly in the short run but takes time to implement. A foreign firm wishing to take advantage of a rapidly expanding market may therefore prefer to choose to enter via acquisition as this allows a relatively quick method of gaining access to the same (Nisbet et al., 2003). A greenfield project gives the investor the opportunity to create an entirely new organization specified to its own requirements, but usually implies a gradual market entry. Greenfield projects may be too slow to achieve investors' desired objectives, notably if they pursue first-mover advantages. An acquisition facilitates quick entry and immediate access to local resources, but the acquired company may require deep restructuring to overcome a lack of fit between the two organizations (Meyer and Estrin, 2001). Additionally, Caves and Mehra (1986), analysing FDI to the US between 1974 and 1980 found that size of the TNC, the diversity of its product range, and its degree of multinationality positively and significantly influenced the decision to acquire. It seems that larger TNCs, with a greater product diversification (but lower R&D intensity) favour acquisitions over greenfields. On the other hand, truly global TNCs, with a large experience in foreign activity, opt rather for greenfield investment.

The choice of mode of entry is also influenced by industry-specific factors. For example, greenfield investment is more likely to be used in industries in which technological skills are key and the TNC gains a competitive advantage by its differentiated products. The need

for complete control and internalisation advantages will direct TNCs rather towards a greenfield investment. Though, high market concentration and high barriers to entry limit the probability of greenfield investment. Similarly, in industries characterized by slow growth or excess capacity, firms are not likely to add new productive capacity, if they can acquire existing assets (UNCTAD, 2000). Thus, if an investor fears that a market does not justify added capacity, an acquisition enables it to avoid the risk of depressed prices and lower unit sales per producer, which might result from new facilities (Daniels and Radebaugh, 1998). Additional reasons for choosing an acquisition over greenfield are the potential synergy and economies of scale envisaged by the investing TNC and the greater market power which it can enjoy in a reasonable period of time.

The decision between greenfield and acquisition is also greatly influenced by several country-specific factors which enter into combination with the firm-specific and industry-specific factors. The choice is influenced by institutional, cultural and transaction cost factors, in particular, the attitude towards takeovers, conditions in capital markets, liberalization policies, privatisation, regional integration, currency risks and the role played by intermediaries actively seeking acquisition opportunities and taking initiatives in making deals (UNCTAD, 2005). If political and economic conditions are not that encouraging and the general country risk assessment is high, then acquisitions will be the preferred option. The same goes for a more lax regulatory environment, weak or no requirements set by the local government for the acquired target, low power of trade unions and the desire (or pressure) to privatise. Cultural differences play an important role. As Kogut and Singh (1988) document on this issue, the greater the cultural distance between the country of the investing firm and the country of entry, the more likely a firm will choose a greenfield over an acquisition. A greenfield project is also favoured if the availability of resources, such as real estate, or access to utilities, raw materials is not restricted and if incentives are offered for such a venture. Then, resource-seekers and export-oriented TNCs will probably make a greenfield investment. On the contrary, market-seeking TNCs that find an existing specific infrastructure, with skilled labour available and low access cost to distribution channels may enter by means of an acquisition. The necessity to adapt the products to local characteristics and the proximity to customers favour the acquisition as well. If there are

strategic assets envisaged by TNCs under the form of resources held by local firms, such as physical assets, brands, vital information or know-how, then certainly the decision will be biased towards acquisition.

## 2. Advantages and Disadvantages of Greenfields and Acquisitions

From the point of view of the investing company, each mode of FDI has its merits and shortcomings. Therefore, TNCs usually analyse the combination between firm-specific, industry-specific and country-specific factors to fundament their decision. Actually, the advantages of a greenfield investment reflect the disadvantages of an acquisition and vice-versa. We will investigate further some of these pros and cons.

A greenfield has certain advantages due to it pioneering position. From the initial phase, the investing firm has the possibility to choose the location and construction of facilities is done according to the management's view. Personnel is hired and trained directly in the spirit of the company and subsequently aspects related to work practice and organisational culture are easier to manage. The implementation of new products and technology works faster and the TNC has total control of decisions, whereas in acquisitions, ownership may include locals, or in transition countries, the state may preserve some voting rights. A greenfield is easier to integrate in the network of the parent firm and usually carries a larger potential for profit as compared to an acquisition. By setting up a new company, rather than acquiring an existing one, it avoids antitrust laws and by solely creating jobs, it avoids social problems (Harris, 1996). Thus, the relationship with the local government is a "friendly" one and the bargaining power of the TNC is, at least theoretically, higher than with an acquisition. The potential for receiving incentives is therefore enhanced. Policy makers often view acquisitions of domestic firms by foreign predators as undesirable, fearing anti-competitive effects of increasingly concentrated ownership by TNCs and wanting to keep profits within their country. Even where acquisition can involve the transfer of improved technology into a country and have beneficial effects for consumers in the region, subsidies are not offered (Albornoz et al., 2005).

Depending on the particular context, a greenfield is subject to several disadvantages as well. The high start-up costs (property, rental, construction) and the usually high capital investment, especially in the first period, make it a riskier business as opposed to the acquisition. To this we can add the potential difficulties with the adaptation of products to customer needs, as the knowledge of the market has to be gained and the uncertainties about demand trends. A greenfield investor has to conquer market share and due to the more difficult process of building relationships to suppliers and distributors, the penetration of the market is likely to be slower than with an acquisition.

In comparison, an acquisition displays specific advantages that cannot be reached by means of a greenfield investment. Due to the knowledge of local customs and institutions on part of the acquired firm, the investing TNC also gains access and relations to suppliers and distribution chains. It overtakes the brands, the reputation and the existing market share of the local firm. Thus, an acquisition builds market presence and cash-flow quicker than a greenfield. The acquiring firm can also improve its competitive position and market power by eliminating a (potential) competitor. From a financial point of view, the acquisition necessitates a smaller initial investment. Capital is injected step by step, leading to lower market risks as opposed to a greenfield. Specific for Central and Eastern Europe, most of the acquisitions were linked to the privatisation process and constituted the preferred option for TNCs, as many domestic firms were undervalued (Welge and Holtbrugge, 1998).

An acquisition is associated with some major disadvantages though. From the start, location is given, constraining freedom of choice. Time is needed and costs occur in the process of finding the right target for acquisition. Once found, the investing TNC will almost certainly face additional costs for changes regarding technology, working habits etc., especially if labour skills are not suitable or existing management poses resistance. The intervention of local government by means of performance requirements is always a potential source of conflicts. If heavy overstaffing exists, there are likely to appear problems with the trade unions. In frequent practical cases of acquisition, difficulties with the integration of the implied organisational cultures occur. The investing TNC may also have difficulties in assessing the weak points of the acquired firm, such as possible costs of previous

environmental pollution or the risk of a faulty management structure. Specific for certain transition countries, including Romania, one pitfall of acquisitions in privatisation deals was that property rights have not been well clarified for a long time. Also, experience in economies of Central and Eastern Europe shows that, in the absence of capital markets or reference prices, there can be major problems in pricing the assets of state-owned enterprises (UNCTAD, 2000).

## 3. Implications of Greenfields and Acquisitions on Host Countries

The importance of FDI to host countries has been demonstrated by the vast literature that investigates the relationship between investing TNCs and host country development. However, if we assess the implications of the two main types of FDI on host countries in a comparative way, several differences appear.

The main difference between the impact on the host country of FDI through acquisitions or greenfields lies in the immediate short-term effects on capital formation and employment. Greenfields add directly to the stock of productive capital and employment in the host country, while an acquisition represents a change in ownership that does not necessarily involve any immediate additions to investment or employment in the host country. Over time, however, the impact of FDI through the two modes is likely to be similar in these and other aspects (UNCTAD, 2006). Thus, the impact of FDI on host countries is difficult to distinguish by mode of entry once the initial period has passed. The possible exceptions are their impacts on market structure and competition, for instance when acquisitions have adverse effects by monopolizing production (closing down of the acquired firms or crowding out of local firms), and economic restructuring, where acquisitions may play a more positive role than greenfield FDI (UNCTAD, 2000).

Even though on the long-term the effects of greenfields and acquisitions may not vary much, the two alternatives are perceived differently. As Meyer (2004) shows, while greenfield projects are generally regarded as having positive spillovers, acquisitions are seen with reservations. Greenfield create new businesses and thus direct positive effects on

employment and domestic value added, and increase competitive pressures on local competitors, which may lead to them improving their efficiency, or being forced to exit the market. Acquisitions, on the other hand, are at the time of entry fully operating enterprises. Following the acquisition, the new owners may or may not continue traditional business relationships, or reorganize the modes of interaction with suppliers, which would strongly impact on related industries. Thus, from the point of view of host countries' governments, greenfields are the better option. A new production facility is created, new jobs are provided, a new customer for local suppliers of utilities and raw materials arises, as well as a new taxpayer in the economy, while the benefits occurring in the case of acquisitions are only incremental to an already existing company, but some of its profits have to be ceded to foreign investors. But, as stated earlier, most of the shortcomings of acquisitions in comparison with greenfields relate rather to the effects at entry or soon after entry. Over the longer term, when direct as well as indirect effects are taken into account, many differences between the impacts of the two modes diminish or disappear (UNCTAD, 2000).

However, as Svensson (1998) shows, the choice of entry mode has several specific implications for the TNC as well as for the host country. Greenfield establishments are more inclined to import intermediate goods from the home country than are acquired firms. Acquired firms, on the other hand, are characterized by their own corporate culture and connections with local subcontractors, and will not always be integrated with the parent. Acquisitions tend to use more local sourcing compared to greenfields as it takes a longer time to establish a local base of suppliers. Thus, their backward and forward linkages to domestic companies are likely to be better developed.

There is one vital difference between the two modes of entry as regards the technology transfer and upgrading that may occur: acquisitions involve existing local firms directly, albeit under new ownership, while greenfield investments do not. The impact of the latter on other local firms' technology is thus slower (UNCTAD, 2000). TNCs induce local suppliers to meet higher quality standards by providing technical assistance and training. Technology transfer translates into higher technological content of exports. This results in increased competitiveness (see for example Cantwell and Piscitello, 1996) and better export

opportunities for the host country. As Hunya (2001) points out, FDI contributed to large extent to technology upgrading in the more developed transition countries. Foreign penetration changed their industrial specialization and contributed to export competitiveness on EU markets, especially when considering greenfields. But, for the rest of transition countries, the impact of FDI on defining new competitive advantages was limited, as most of FDI did not occur as greenfields, but as acquisitions in the privatisation process. As demonstrated by Marinescu (2007), in the case of Romania the largest FDI privatised mainly industrial companies with already above average export propensity or were directed towards various services and trade, which are typically domestic market-oriented sectors.

Traditionally it is believed that FDI (in both its modes) improves productivity of local firms. This doesn't hold true in all the cases though. In a comparative study on Norwegian manufacturing firms, Balsvik and Haller (2005) find that foreign acquisitions have a positive effect on the productivity of domestic plants, while the impact of greenfield entry is negative. Also, when considering crowding out effects, greenfields are more prone to drive local firms out of the market. However, in final product markets, FDI entering through either mode may crowd out domestic firms if foreign affiliates are more efficient than locally owned firms (UNCTAD, 2000).

In transition countries, privatisation accounted for the largest part of foreign acquisitions. This generates particular characteristics regarding the effects on host economies. The investor has to take responsibility for enterprise transformation and may face considerable post-acquisition investment in resource upgrading and organizational change while being constrained by stipulations of the privatisation contract. But, investors reported fewer bureaucratic obstacles to acquiring land and obtaining the permits required to start or expand production (Meyer, 2001). Also, it seems that greenfield FDI upgrades employment conditions more than acquisitions because the latter may tend to stick with the inherited norms and practices for some time (UNCTAD, 2000).

Positive effects of acquisitions include the much-needed capital for investment purposes, new technology, better management, a change in attitude by the disciplining of labour and the emphasis on quality, an efficiency gain, access to new export markets, a better position on the local market, enhanced reputation of the company and brand, improvement of relationships with customers and an overall higher financial credibility of the acquired firm.

The negative aspects of acquisitions in the privatisation process are related to the cutting off of local suppliers, restriction of production to low value-added activities and import of a major proportion of higher-value intermediate products, loss of assets, a possible monopoly position, introduction of unacceptable work procedures that can lead to unrest, increased market concentration and massive layoffs. A decline in employment is possible as acquired companies are restructured and rationalized. Indeed, most studies find that employment in privatised firms usually falls (UNCTAD, 2004). Though, when acquisitions of ailing firms are undertaken, then the transaction is actually saving jobs and the effect on competition is not different from a greenfield investment. As noted by Ilie (2002), in the case of a privatisation process with foreign investors, the contribution to economic growth arises by means of maintaining in operation a firm that has become efficient.

## 4. Greenfields and Acquisitions in Romania

In the first decade of transition, Romania attracted small amounts of FDI, due to various reasons, one of them being the slow pace of privatisation. Romania's late start in the privatisation of big companies (in fact, after 1997) led to the loss of important opportunities in comparison to neighbouring countries (Marinescu, 2003). That is why initially most of FDI was greenfield (less than 30% were acquisitions in the period 1990-2000), whereas the increased FDI flows in the last few years were mainly linked to privatisation of state-owned enterprises. Almost half of total FDI stock at the end of 2006 stems from greenfields, slightly surpassed by acquisitions (see table 1.). The share of greenfields in total FDI stock has risen from 42.2% in the previous year to 48.5%, with industry, trade and the finance and insurance sector as the main destinations.

Table 1. The distribution of FDI stock on greenfields and acquisitions (million euro)

| Selected sectors | Greenfield | % | Acquisition | % |
|---|---|---|---|---|
| Industry | 4,912 | 32.4 | 10,243 | 67.6 |
| - Mining | 156 | 7.4 | 1,949 | 92.6 |
| - Metals | 243 | 8.5 | 2,605 | 91.5 |
| - Food & Beverages | 1,127 | 59.1 | 781 | 40.9 |
| - Oil processing, chemicals, plastics | 504 | 32.7 | 1,037 | 67.3 |
| - Transport equipment | 568 | 40.4 | 838 | 59.6 |
| - Cement, glassware, ceramics | 225 | 20.9 | 849 | 79.1 |
| Trade | 3,819 | 90.7 | 390 | 9.3 |
| Services | 7,994 | 52.8 | 7,154 | 47.2 |
| - Finance and insurance | 2,929 | 38.1 | 4,749 | 61.9 |
| - Post and telecommunication | 1,653 | 58.4 | 1,178 | 41.6 |
| Total | 16,725 | 48.5 | 17,787 | 51.5 |

Source: based on data from the Romanian National Bank (2007)

By sectors, the highest share of greenfields as opposed to acquisitions can be found in trade (90.7%), followed by food & beverages (59.1%) and telecommunications (58.4%) due to the underdevelopment of these sectors in the communist years. Acquisitions prevail in mining, metals and the cement industry, were TNCs found consistent targets. By country of origin, the Netherlands has the highest share in greenfield FDI stock in Romania (24.9%), followed by Germany (14.3%) and Austria (12.1%). Considering the top 10 investing countries in Romania, the highest percentages of greenfields in the total FDI stock are registered by the USA (73.4%), Netherlands (70.7%), Germany (68.9%), Cyprus (62.7%) and Italy (59.3%). Austria, France, Switzerland and Greece undertook mainly acquisitions. Regionally, a stunning 66.5% of all greenfield FDI stock went to Bucharest, but at the capital's level FDI was divided 50%-50% between greenfields and acquisitions. From the regions that attracted higher amounts of FDI, the West region and the Centre region of the country were preferred for greenfields (68.3% and 62.6% respectively out of regional FDI) while the South-Eastern region was a target for acquisitions, amounting to 85.5% of all regional FDI.

Analysing the evolution of the average turnover recorded at the level of the two types of FDI by taking into consideration the foreign affiliates of TNCs included in the Top 100 largest companies in Romania ranked by turnover (Finmedia, 2007), we can show that there is a significant increase at the level of both types of investment (see figure 1).

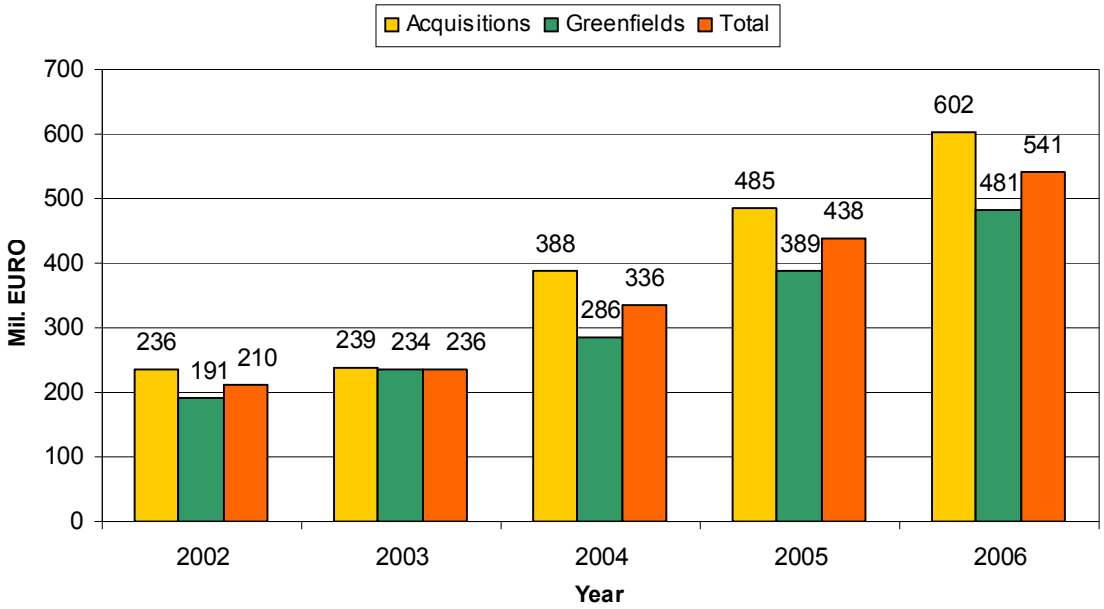


Figure 1. The evolution of the average turnover at the level of the two types of FDI

Source: based on data from the Top 100 largest companies in Romania (2002- 2006)

Both types of FDI recorded significant increases of turnover in the period 2002-2006. Thus, the average turnover increased by around 100 million EURO each year. For 2002 and 2003, data suggests that the average turnover reported by foreign affiliates is almost similar for both types of FDI. However, since 2004, acquisitions have advanced significantly compared to greenfields in terms of turnover. That year has been the starting point of an important range of privatisation deals, which allowed foreign investors to make important acquisitions. The most remarkable acquisition (excluding the financial sector) was concluded by the privatisation process of oil company Petrom, the largest Romanian company by turnover, with Austrian company OMV. Petrom held on firmly to the leading spot of the Top 100 largest companies in Romania ranked by turnover after privatisation until the present day.

## 5. Multiple Correspondence Analysis Concerning the Two Types of FDI and Some Specific Characteristics

The first category of analysis took into consideration the links between the two types of FDI and the financial results recorded by foreign affiliates in 2006.

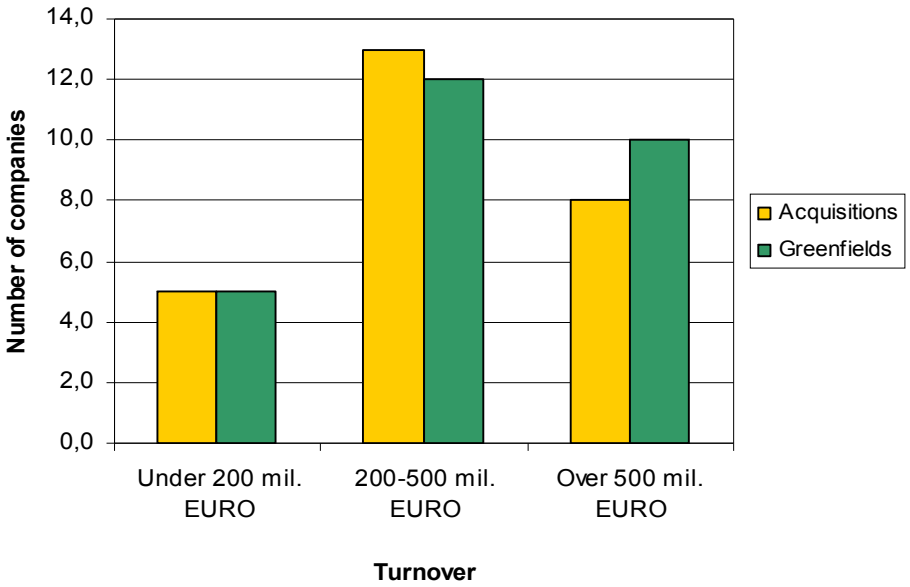


Figure 2. The distribution of foreign affiliates depending on average turnover

Source: based on data from the Top 100 largest companies in Romania (2006)

If we analyse the distribution of FDI depending on three turnover categories, we can arrive at the conclusion that the majority of foreign affiliates included in the Top 100 in 2006 have recorded a turnover inside the interval 200-500 million EURO (see figure 2). There is quite a balanced situation between acquisitions and greenfields for every category of turnover, the differences in terms of the number of companies being insignificant.

As regards the profit margin earned by foreign affiliates in the panel, more than 64% of the analysed companies have recorded profit margins lower than 10% (see table 2). Other 7.5% reported losses in 2006, but there are also 28.3% of the analysed companies that had profit margins above 10%.

Table 2. The frequency of companies on profit margin categories

| | | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | Loss | 4 | 7.5 | 7.5 |
| | 0-5% | 21 | 39.6 | 47.2 |
| | 5-10% | 13 | 24.5 | 71.7 |
| | 10-20% | 8 | 15.1 | 86.8 |
| | Over 20% | 7 | 13.2 | 100 |
| | Total | 53 | 100 | |

Source: based on data from the Top 100 largest companies in Romania (2006)

If we split the companies on the two types of FDI (see figure 3), there is clear evidence that a large number of acquisitions reported high profit margins in comparison with greenfields that are grouped in the categories with medium profit margins (0-5% and 5-10%). There are also more greenfields that reported losses, compared to only one acquisition.

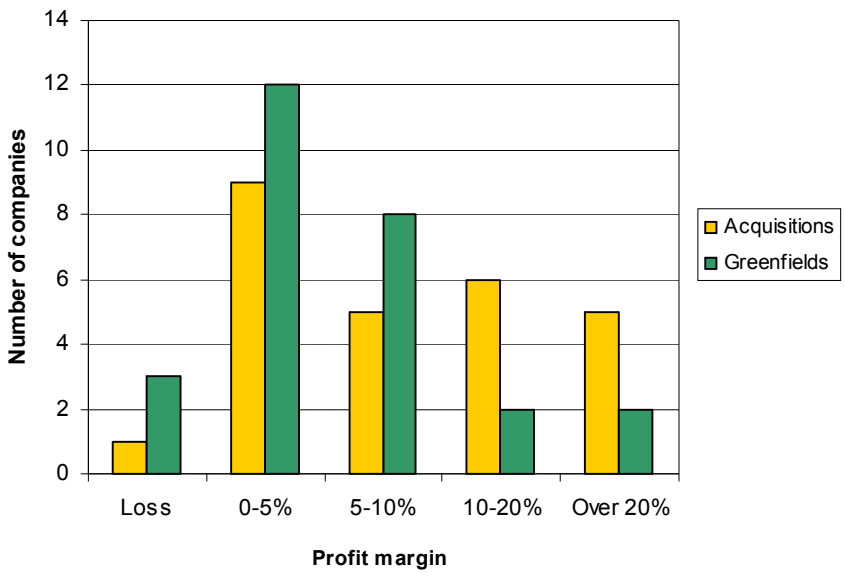


Figure 3. The distribution of foreign affiliates depending on profit margin

Source: based on data from the Top 100 largest companies in Romania (2006)

In order to analyse the simultaneous association between the above variables, we used the homogeneity analysis, which quantifies nominal (categorical) data by assigning numerical values to the cases and categories. Homogeneity analysis is also known by the acronym HOMALS or as "multiple correspondence analysis". The goal of this method is to describe

the relationships between two or more nominal variables in a low-dimensional space containing the variable categories as well as the objects in those categories. Objects within the same category are plotted close to each other, whereas objects in different categories are plotted far apart.

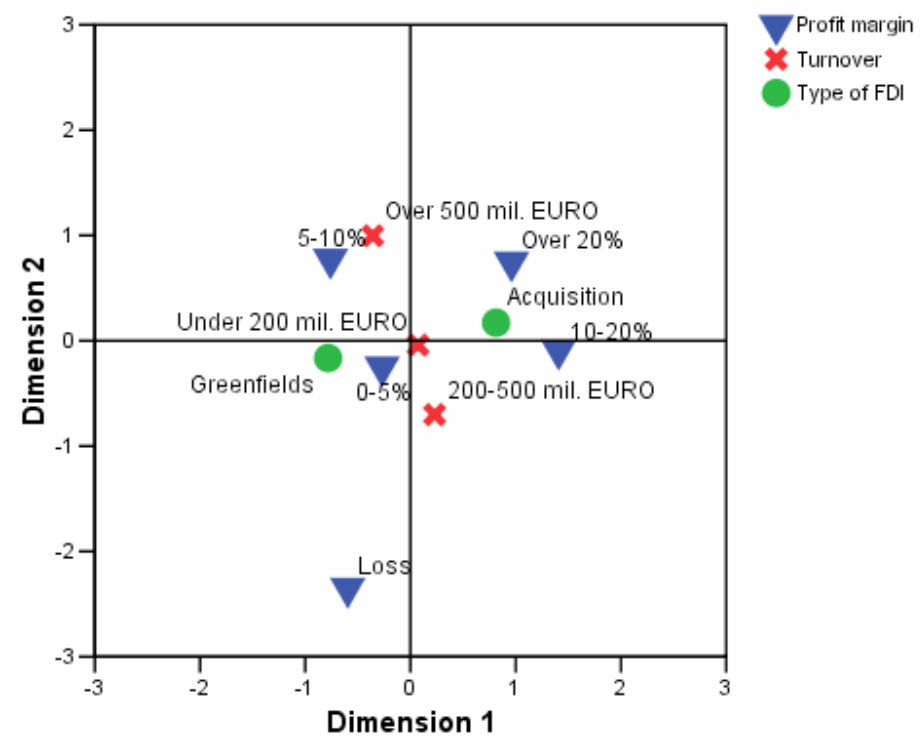


Figure 4. Homogeneity analysis between type of FDI, turnover and profit margin

The categories of the analysed variables plotted in figure 4 underline the associations identified above. We can see that the three categories of turnover are almost equally distanced between greenfields and acquisitions, which express a high homogeneity. Concerning the profit margin, there is a high correspondence between greenfields and profit margins situated in the range 0-5% and also a medium association with the category 5-10%. At the same time, acquisitions are strongly associated with profit margins between 10% and 20% and also with the above 20% category.

The category of profit margin above 20% is equally distanced between the extremes of turnover categories (under 200 million EURO and above 500 million EURO). Almost the same situation is recorded for the rest of profit categories, except for the “Loss” category,

which is plotted far apart from the rest of categories due to the low number of companies that recorded losses. In spite of this fact, this category is closer to greenfields than to acquisitions, as we also demonstrated above. The equidistance between the categories of turnover and profit margin reveals the absence of a correlation between the two variables.

This absence of correlation is also put in evidence by the Pearson correlation coefficient, obtained using the SPSS system, by taking into consideration the effective values of turnover and profit margin recorded by every analysed company (see table 3).

Table 3. Significance of Pearson correlation coefficient

| | | Turnover | Profit margin |
|---|---|---|---|
| Turnover | Pearson Correlation | 1 | 0.143 |
| | Sig. (2-tailed) | | 0.307 |
| | N | 53 | 53 |
| Profit margin | Pearson Correlation | 0.143 | 1 |
| | Sig. (2-tailed) | 0.307 | |
| | N | 53 | 53 |

The value of the Pearson correlation coefficient is 0.143, very close to zero, which indicates a poor correlation between the analysed variables. Taking into account the statistical significance of this coefficient as well, we can conclude that the two variables are not correlated. The significance level (Sig. 2-tailed) has the value of 0.307, which exceeds the significance level of 0.05 corresponding to a 95% confidence level. In this respect, we can conclude that the profit margin does not depend on the level of turnover.

Another important variable for our analysis was the industry in which FDI was undertaken. In order to get relevant results, the fields of activity were reduced to 3 categories: industry, trade and services (no foreign affiliate could be found in agriculture to be present in the Top 100 largest companies in Romania ranked by turnover in 2006).

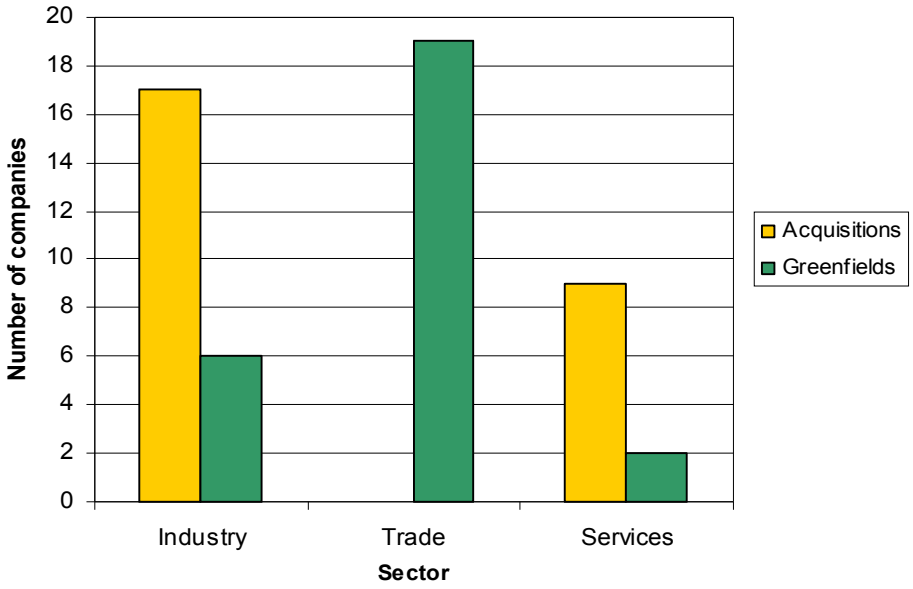


Figure 5. The distribution of foreign affiliates depending on sector

Source: based on data from the Top 100 largest companies in Romania (2006)

At the level of the number of foreign affiliates included in the panel, the majority of FDI took place in industry followed by trade and then services (only non-financial companies were ranked). Taking into consideration the type of FDI, the largest number of greenfields is recorded in the trade sector, whereas acquisitions were undertaken mainly in the industrial sector, followed by the services. No acquisition could be found in trade to be present in the Top 100 largest companies in Romania in 2006. This stems from the fact that trade companies developed mainly in the last years, starting from scratch after 1990.

Putting the sector on the same plot with the above considered variables we can find new associations (see figure 6). Thus, foreign affiliates active in services recorded mainly high turnovers, above 500 million EURO, with profit margins situated between 10% and 20%. Foreign affiliates in the trade sector, where we can find the largest part of greenfields, are almost equally distanced to the turnover categories of 200-500 million EURO and above 500 million EURO. The profitability of these companies is situated mainly in the 5-10% category, but also in the 0-5% category.

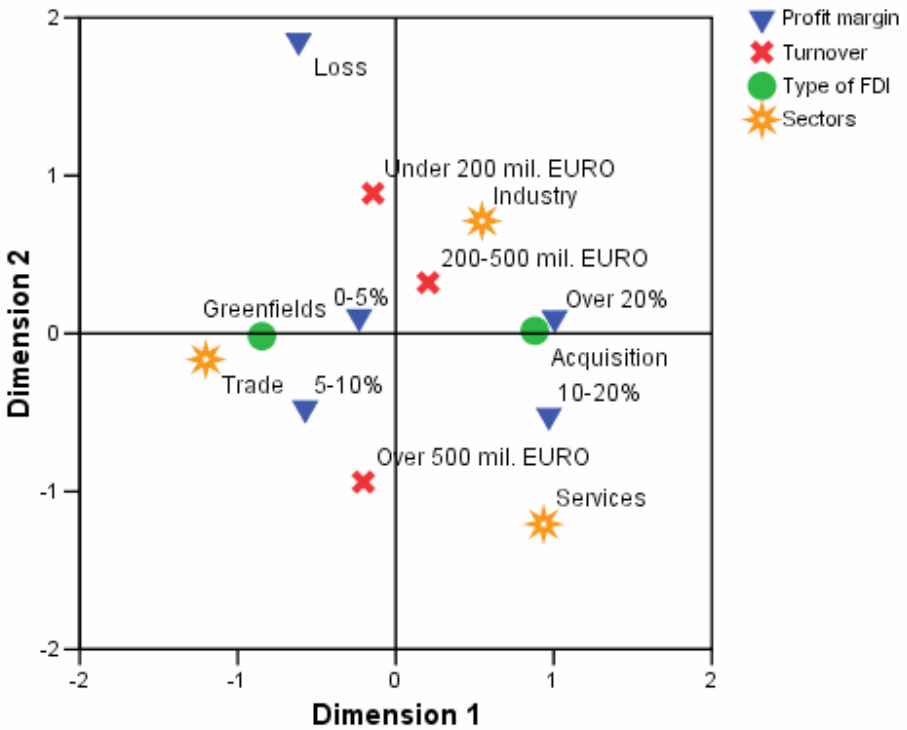


Figure 6. Homogeneity analysis between type of FDI, turnover, profit margin and sector

Among industrial companies, a large part recorded turnover of 200-500 million EURO, but also in the category of less than 200 million EURO. This sector reunites the largest part of FDI with profit margins that exceed 20%.

In terms of profitability, the ranking is dominated by the cement industry, with three companies having profit margins over 20%: Lafarge Ciment Romania (40.25%), Carpatcement Holding (32.89%) and Holcim Romania (26.76%). All these three companies acquired several existing Romanian cement factories. High and impressive profit margins have been also recorded by greenfields in telecommunications, such as: Orange Romania (43.59%) and Vodafone Romania (37.36%).

Another analysis took into consideration the home country of foreign affiliates and the location of FDI in Romania. The main objective was to find out the major sources of FDI and its location in correlation with the type of FDI. The need for this analysis started from the differentials identified at the level of Romanian development regions, the Bucharest region being far ahead in comparison to the other seven regions.

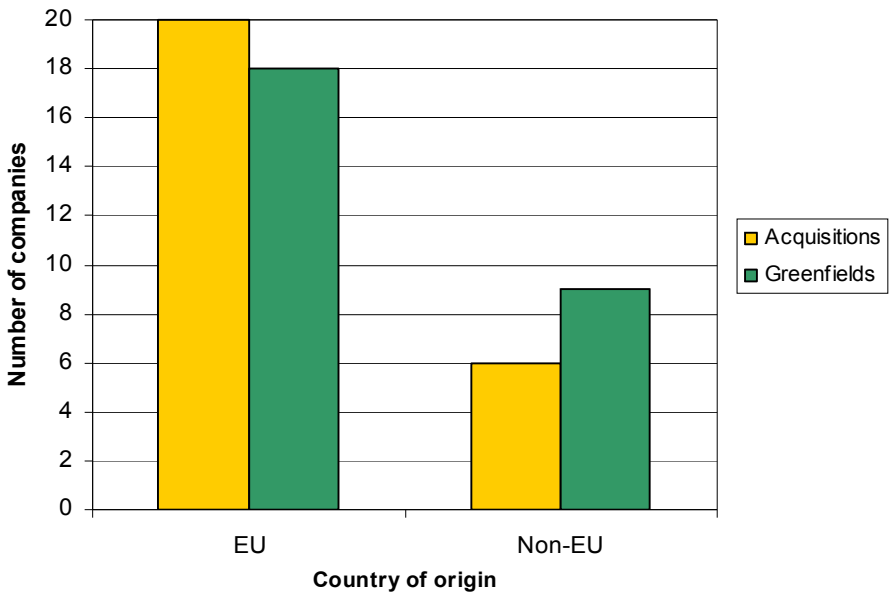


Figure 7. The distribution of foreign affiliates depending on country of origin

Source: based on data from the Top 100 largest companies in Romania (2006)

The majority of analysed companies stem from EU countries, more than a half of these coming from Germany (11 companies) and France (9 companies). The number of acquisitions (20 companies) is very close to the number of greenfields (18 companies) in the case of EU countries. On the other hand, foreign affiliates coming from non-EU countries are less than half in numbers compared to those from the EU. For this category, the number of greenfields exceeds the number of acquisitions at the level of analysed companies, but the difference is quite small.

Taking into consideration the territorial distribution of the two types of FDI at the level of the Top 100 largest companies in Romania in 2006, we can observe that the number of

foreign affiliates of TNCs which have located their headquarters in the country's capital, Bucharest, is 50% higher than the ones established in the rest of seven regions of Romania.

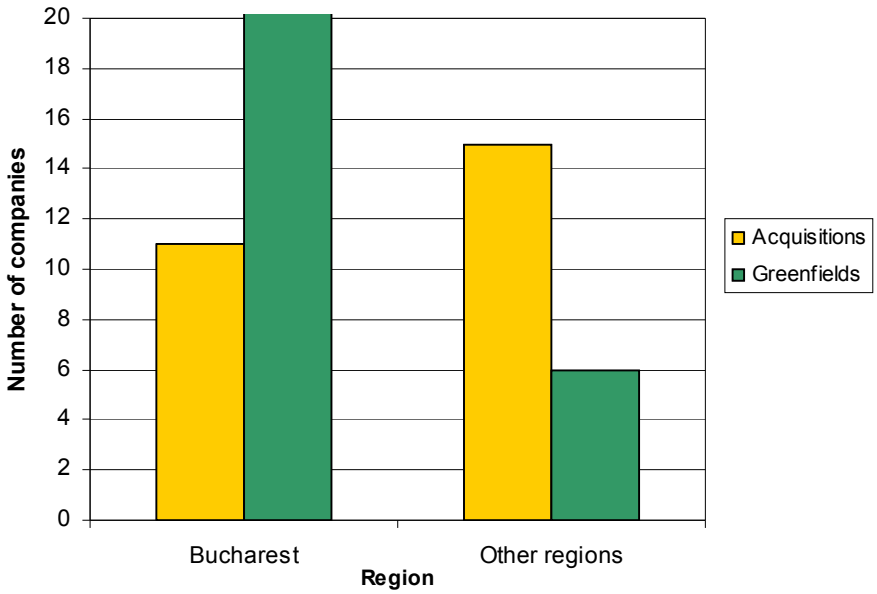


Figure 8. The distribution of foreign affiliates depending on region

Source: based on data from the Top 100 largest companies in Romania (2006)

Divided on the two types of FDI, the number of greenfields established in Bucharest is almost double than the number of acquisitions, whereas in the rest of Romania's regions, acquisitions are the most frequent type of FDI (primarily due to the fact that location was already given).

Taking into consideration the above variables together with the field of activity we can find some interesting associations (see figure 9). The greenfields are mainly situated in Bucharest, most companies that chose the country's capital being involved in trade. The acquisitions have been undertaken especially in the other seven Romanian regions, the most frequent sectors being industry and services. At the same time, companies in services are almost equally divided between Bucharest and the other regions.

The companies originating from EU countries are almost equally distanced to the three economic sectors, being a little closer to Bucharest than the other regions. On the other hand, the companies that come from non-EU countries are closer to the industrial sector, being located mainly in other regions. There is no association between the companies from non-EU countries and services, these two categories being situated on opposite sides of the plot, at long distance between them.

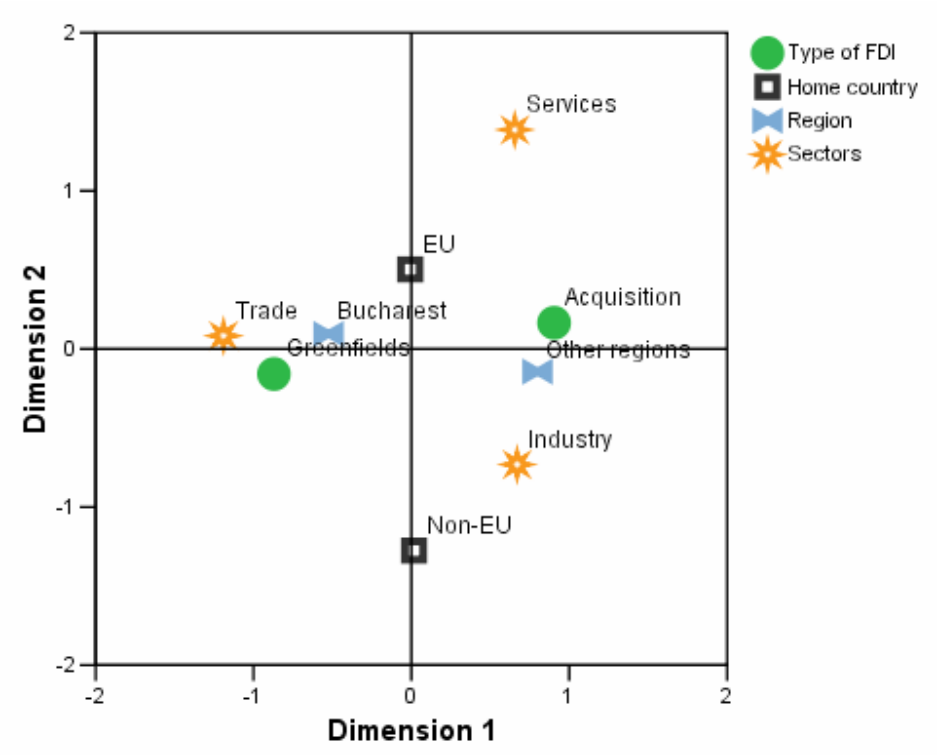


Figure 9. Homogeneity analysis between type of FDI, home country, region and sector

In order to have a general overview of the associations between the two types of FDI and the specific characteristics of the foreign affiliates in the panel, we extended the multiple correspondence analysis (homogeneity analysis – HOMALS) at the level of all the variables took into consideration above. Applying the method with the help of the SPSS system, we obtained the plot chart presented in figure 10.

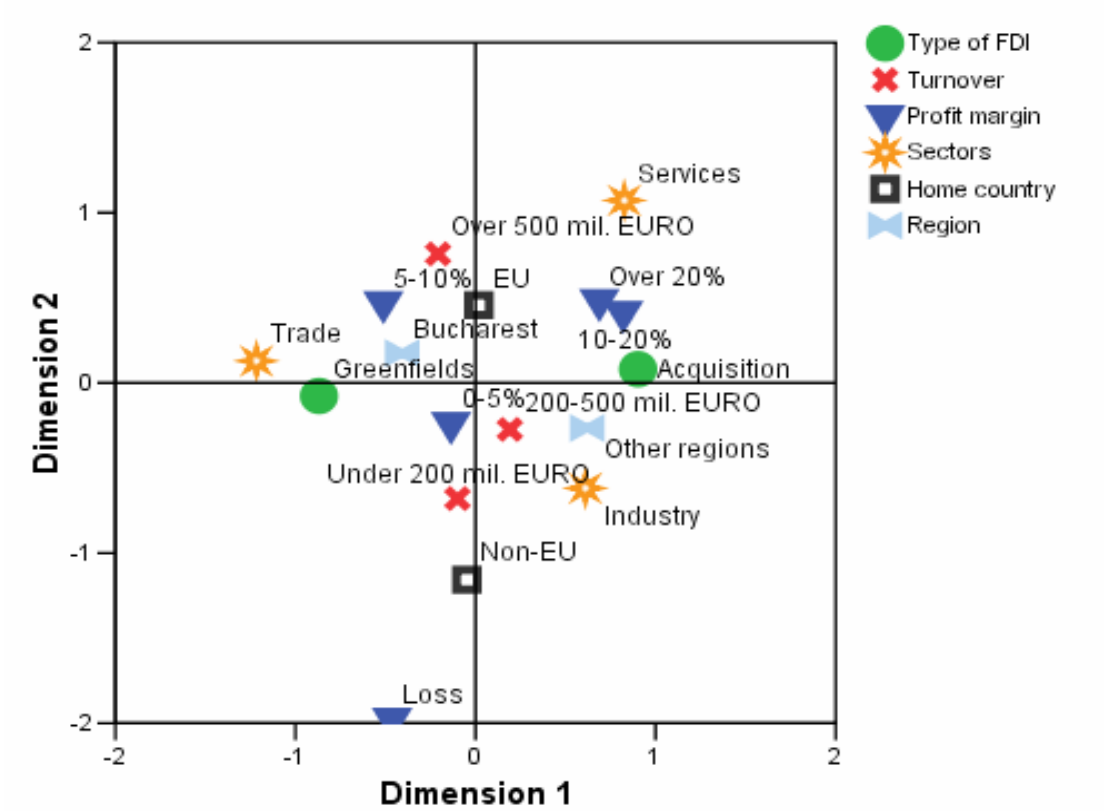


Figure 10. Homogeneity analysis between type of FDI and specific characteristics of companies

From the plot chart presented above we can conclude that there is a high homogeneity between the categories of the considered variables, as the distances between them are very small. In spite of this fact, there are some areas of discrimination that result from the association of several specific categories. One of these areas surrounds the greenfields, which are established mainly in the trade sector, being situated predominantly in the Bucharest region. These companies are also associated with low margins of profit.

Another area of discrimination can be isolated around the acquisitions, which are located mainly in the other seven Romanian regions. This type of FDI is present mainly in industry and services, being associated with higher rates of profitability (especially for companies involved in the service sector).

The third area of discrimination is formed around the companies with investors coming from non-EU countries. Such companies are active especially in industry, being situated mainly outside of the country's capital. These ones are strongly associated with small turnover and low profit margins (even loss). At the level of companies with investors from EU countries there is a high homogeneity. They are situated quite close and equally distanced to the majority of the other categories determined by the analysed variables. In spite of this homogeneity, we can notice a small deviation that shows a higher association of these companies with the Bucharest region than the association with other regions.

The plot chart also shows that the analysed companies involved in services recorded high turnover and profit margins, which underlines the attractiveness of this sector.

## 6. Conclusions

The aim of this paper was to investigate the comparative characteristics of greenfields and acquisitions as the two main types of FDI, applied to the case of Romania. Analysing the Top 100 largest companies in Romania ranked by turnover, we selected those that fall under the FDI category and separated them on greenfields and acquisitions (the latter category comprising mergers and brownfields, for practical purposes). Thus, we could discover some interesting features related to the situation and behaviour of the two modes of entry used by TNCs in Romania.

The FDI stock is quite balanced between greenfields and acquisitions and large affiliates of TNCs in Romania separated on the two categories are also close to each other in respect to the average turnover. When considering the profit margin, though, acquisitions are clearly ahead of greenfields. Greenfields dominate the trade sector, while acquisitions were geared towards industry and services. Judging by the home country, foreign affiliates set up by greenfield investment and acquisitions were roughly the same in numbers when originating from EU countries as well as from non-EU countries. At Romanian regional level, most of greenfields are located in Bucharest, whereas in the other regions, acquisitions prevail.

By means of a multiple correspondence analysis we found some relations of association between the two types of FDI and several variables. Thus, greenfields are definitely linked to trade in Romania, they are located mainly in Bucharest and they register relatively low profit margins. Acquisitions tend to gather in other regions than Bucharest and operate mainly in industry and services, with higher profit margins (especially for services). Given the results of this study, we are sure that a range of future research possibilities is opened up in this matter for other countries at international level.

**References**


Albornoz, F., Corcos, G., Kendall, T. (2005), "Subsidy competition and the Mode of FDI: Acquisition vs Greenfield", 7th ETSG Annual Conference, Dublin.

Balsvik, R., Haller, S. (2005), "Foreign Firms and Host-Country Productivity: Does the Mode of Entry Matter?", 7th ETSG Annual Conference, Dublin.

Cantwell, J., Piscitello, L. (1996), "The Internationalization of Business and Economic Development", *Trends in World Economies*, 78, Institute of World Economics, Budapest.

Caves, R., Mehra, S. (1986), "Entry of foreign multinationals into US manufacturing industries, in M. Porter, ed., *Competition in global industries*, Harvard Business School.

Daniels, J., Radebaugh, L. (1998), *International Business,* 8th edition, Addison-Wesley.

Finmedia (2007), *România Top 100 Companii*, no. 6.

Grunfeld, L., Sanna-Randaccio, F. (2005), Greenfield Investment or Acquisition? Optimal Foreign Entry Mode with Knowledge Spillovers in a Cournot Game, 7th ETSG Annual Conference, Dublin.

Harris, N. (1996), *European Business*, MacMillan: London.

Harzing, A. (1999), "Acquisitions versus greenfield investments: both sides of the picture", University of Bradford, mimeo.

Hunya, G. (2001), "Uneven competitiveness of industries in the wake of foreign penetration in advanced transition economies", *Transnational Corporations*, 10(2), pp. 35-66.

Ilie, G. (2002), *Investitii internaționale*, UCDC: Bucharest.

Kogut, B., Singh, H. (1988), "The Effect of National Culture on the Choice of Entry Mode", *Journal of International Business Studies*, Fall, pp. 411-432.

Marinescu, N. (2003), "Foreign Direct Investment in Romania", *Inblick Osteuropa*, Uppsala University, Sweden, 2-3, pp. 25-32.

Marinescu, N. (2007), "The Link between Exports and Foreign Direct Investment: The Case of Romania", 9th ETSG Annual Conference, Athens.

Meyer, K. (2001), "International Business Research on Transition Economies", in A. Rugman, T. Brewer, eds., *Oxford Handbook on International Business*, Oxford University Press.

Meyer, K. (2004), "Perspectives on Multinational Enterprises in Emerging Economies", *Journal of International Business Studies*, 34(4), pp. 259-277.

Meyer, K., Estrin, S. (2001), "Brownfield Entry in Emerging Markets", *Journal of International Business Studies*, 32(3), pp. 575-584.

Nisbet, P., et al. (2003), "UK Direct Investment in the United States: A Mode of Entry Analysis", *International Journal of the Economics of Business*, 10(3), pp. 245-259.

Romanian National Bank (2007), *Investițiile străine directe în România la 31 decembrie 2006*.

Svensson, R. (1998), "Three empirical models for the entry mode choice in foreign direct investment", *Applied Economics Letters*, 5, pp. 201-204.

UNCTAD (2000), *World Investment Report 2000: Cross-Border Mergers & Acquisitions and Development*, United Nations: New York and Geneva.

UNCTAD (2004), *World Investment Report 2004: The Shift Towards Services*, United Nations: New York and Geneva.

UNCTAD (2005), *World Investment Report 2005: Transnational Corporations and the Internationalization of R&D*, United Nations: New York and Geneva.

UNCTAD (2006), *World Investment Report 2006: FDI from Developing and Transition Economies: Implications for Development*, United Nations: New York and Geneva.

UNCTAD (2007), *World Investment Report 2007: Transnational Corporations, Extractive Industries and Development*, United Nations: New York and Geneva.

Welge, M., Holtbrugge, D. (1998), *Internationales Management*, Moderne Industrie: Landsberg / Lech.