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Main determinants of Foreign Direct Investments in Romania  
- A quantitative view of the regional characteristics involved in the  
investment strategies of foreign companies -  
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**Abstract**

Several variables have been identified in the literature as important determinants of the foreign direct investments in a specific region. Identifying these characteristics (characteristics emphasized at regional level) that determined the foreign companies (from the manufacturing industry) to invest in Romania is extremely important in the current economic situation, when the foreign investments are considered to be one of the most important levers that can restore the balance in the Romanian economy and can serve as the base for sustainable economic growth. Shaping the profile of the foreign investor in Romania, based on the main factors taken into consideration by companies when building their investment strategies, is the main goal of this paper. The survey described in this study is conducted on a sample of 235 companies which met the defined criteria (having more than 100 employees, being a foreign investment, being active at least until 2009, activating in the manufacturing industry). The obtained data were analyzed with the SPSS software package and the results obtained were used to provide a map of the main factors used by a foreign entity when developing its investment strategy.

*Keywords:* Investment strategy, Development region, Sampling mechanism, Foreign Direct Investment

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**1. Introduction**

It has been recognized that different motives lie behind the investment decisions of firms in foreign countries. It is argued that "...there are substantial differences in economic performance across regions in virtually every nation. This suggests that many of the essential determinants of economic performance are to be found at the regional level" (Porter, 2003, p.550). Therefore when considering investing in a foreign country the environmental scan (both at national and regional level) is one of the main aspects taken into consideration in the process of developing your strategy.

Following the collapse of communism, the countries of Central and Eastern Europe, have been forging strategies to attract foreign capital as a way of achieving sustainable economic growth (Martin and Velázquez, 2000). Foreign

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direct investment by multinational corporations plays an important role in the transformation of former centrally planned economies into vibrant market systems, since it provides an inflow of capital, management skills and jobs, alongside increasing exports and transfer of technology. It is also perceived as one of the conditions paving the way for improving the competitiveness of the economy and enhancing the provision of goods and services for the domestic market.

With the implementation of global and regional strategies by multinational corporations, the choice of location is becoming increasingly important, hence requiring a better understanding of the internationalization process and of the factors influencing the spatial distribution of FDI. There are substantial differences in economic performance across regions in virtually every nation. This suggests that many of the essential determinants of economic performance are to be found at the regional level (Porter, 2003, p.550). In Romania also, development happened in a differentiated rhythm, and there were strong discrepancies between the different regions of the country. The development of the capital city and its outskirts (surrounding areas) is easy to explain by observing that the resources, human capital and decisional factors are concentrated in this area. (Therefore this area will not be further discussed in our study). Furthermore, by analyzing the rest of the regions we can observe different development levels, whose explanations are not as obvious. This is why, through this paper we will try to identify and quantify the most important factors (related to each region's potential) which influenced the managerial decision of localizing the investment in one region or another. Assuming that foreign companies that invested in Romania have chosen the region where to invest based on a strategic plan, in this paper our attention is focused on the early stage of such an undertaking (the strategy development process). More exactly our main interest is on the process of environmental scan stage, when characteristics of each region were indentified, quantified and comparatively analyzed (between the 41 counties of Romania or between the 8 regions of NUTS-II). Identifying these characteristics that determined the foreign companies (from the manufacturing industry) to invest in Romania is extremely important in the current economic situation, when the foreign investments are considered to be one of the most important levers that can restore the balance in the Romanian economy and can serve as the base for sustainable economic growth. Therefore, identifying them is vital in the analysis process of the type of investor our country can attract and more precisely each region in particular. Likewise, this endeavor is important in establishing the macro-economic policies in Romania when a balance of the development of each region is tried. Only by identifying the strengths and weaknesses in attracting investors for each region in particular, disadvantaged communities can be helped. In these circumstances, we will organize further our research paper in two main sections as follows: (1) literature review and general framework talking about a few characteristic features of Romania in the analyzed period, and a literature review on the following topics: main FDI determinants and statistical survey and (2) methodology where we describe the main characteristics of our survey, we analyze the selection mechanism and finally we present the main result of our research.

## **2. Literature Review and general framework:**

### *2.1. Territorial and administrative organization of Romania (NUTS II)*

After 1990, Romania shifted its spatial policy from a central-based policy to a regional-based policy, in compliance with EU-standards. According to four criteria (number of inhabitants, surface, cultural identity and functional-spatial relations) Romania was divided 1998 into eight Development Regions. The eight regions serve as NUTS-II units and as a framework for development policies while the counties serve as NUTS-III units. The eight units used further in our study are: North-East, South-East, South, South-West, West, North-West, Center and Bucharest - Ilfov.

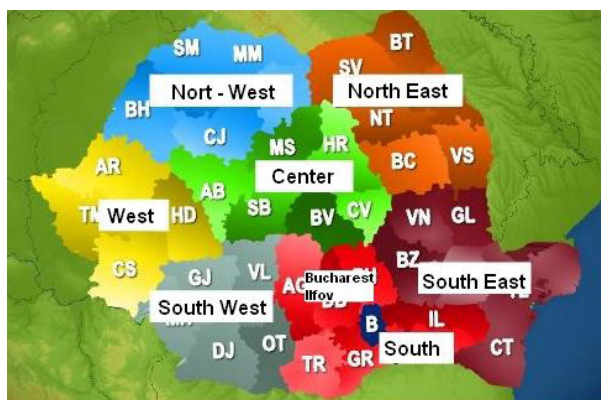


Fig. 1 Romanian Development Regions (according to the Romanian Ministry of regional development and tourism)

## 2.2. Main Foreign Direct Investments determinants

Several variables (constructed at the regional level) have been identified in the literature as important determinants of FDI. According to Chakrabarti (2003), an expansion in the market size of a location leads to an increase in the amount of direct investment in that location through an increased demand. Foreign investors are likely to be attracted by large markets allowing them to internalize profits from sales within the host countries. According to Woodward (1992) foreign companies prefer states with strong markets and low unionization rates. The effect of specific market and regional growth characteristics are also taken into consideration in the spatial analysis of FDI in the United States, by Bagchi-sen and Wheeler's study. **Population** is a measure of the market size and it indicates the economic dynamics of a location and states market growth potential (Bagchi-sen and Wheeler,1989). The other important determinant of FDI which defines local market size is **GDP** (Laura Alfaró 2003, Reschenhofer et al, 2012).

Another major determinant of FDI is the existence of agglomeration economies. Agglomeration economies are important to attract foreign direct investment. Agglomeration economies refer to the positive externalities and economies of scale associated with spatial concentration activities and co-location of related production facilities (Chadwick, 1989; Krugman,1991; Smith and Florida, 1994). There is systematic evidence suggesting that multinational companies are attracted to clusters of economic activities in their own and in closely related industries and activities (Glickman and Woodward, 1988; Wheeler and Mody, 1992; Head and Ries, 1996; Devereux and Griffith, 1998; Guimaraes et. al., 2000; Driffield and Munday, 2000). **The total number of industrial enterprises** in a county is expected to significantly attract FDI since the existence of industrial clusters signals a set of favorable condition for foreign investors such as the presence of local suppliers, specialized labor and infrastructure (He, 2002). According to Coughlin, Terza and Arromdee (1991), the density of manufacturing activity was one of the important factors in location decisions of foreign firm in the US during 1981-1983. The other variable related to agglomeration economies is population density (Lale Berköz, Sevkiye SenceTurk,2009).

Infrastructure is another key factor that determines FDI. There is a positive relationship between infrastructure and inward FDI. Empirical studies support for the importance of infrastructure in FDI location decisions is provided by Wei and et al. (1999), Mariotti and Pischitello (1995), Broadman and Sun (1997) and He (2002). A location with good infrastructure is more attractive than the others (Wei and others,1999; He,2002).

Cantwell (1989) states that knowledge-seeking investments vary across locations because they depend on location specific factors, such as the number of scientists and educated people in the area, previously established innovations, R&D intensity, the education system, and good linkages between educational institutions and firms. As a result, companies may supplement their existing technologies by expanding internationally to access new knowledge. This expansion may suggest two types of knowledge-seeking behavior between firms originating from leading versus lagging technical centers (Cantwell and Janne, 1999). Companies from lagging technical locations need to catch up and locate their research centers abroad in order to improve their existing technology. However, while firms from leading locations do not need to catch up, they may also locate their research centers abroad to source more diverse knowledge, since "... the acquisition of new skills, and the generation of new technological capacity, partially

embodied in new plant and equipment, must be a goal of every firm" (Cantwell, 1989, p.8). Florida (1997) finds that accessing new indigenous technology is more important than customizing existing technology for new markets (Wilbur Chung and Juan Alcácer, 2002).

Having these variables identified as main determinants of FDI we assume that they were also included in the situational analyses performed by companies who have decided to invest in Romania and they will also be analyzed by other companies when planning their strategies of investment in Romania. Therefore our results may be included in the early stage of a strategic planning process (our results can fit in the first stage of all the following approaches: *Situation-Target-Proposal, See-Think-Draw*).

### 2.3. *Non probabilistic samples used in market research*

A complete environmental analysis requires a clear and complex quantitative picture of all important elements that would need to be included as inputs in the decision making process. Therefore gathering data about all these necessary elements is of crucial importance because in the accuracy of this process lay the foundation of the entire construction developed in the next stages.

When discussing about a quantitative approach the most important tool used in this stage of the environmental analysis process is the statistical sample survey. This method is common to a large variety of market researches being feasible at relatively acceptable costs. However, the main shortcoming in most cases when using sampling techniques is the implementation of randomization. This characteristic of the sampling process is of extreme importance and its importance is obvious when trying to fundement decisions on results obtained through such a process. Results obtained from a non-random sample (non-probabilistic samples: convenience sample, purposive sample etc) have no theoretical support for statistical inference and therefore using the sample as a mirror of the target population has no fundament.

This is the reason why, when using a sample that was not selected using a probabilistic random mechanism, analyzing the selection mechanism is mandatory before using the results as fundaments for any other actions including managerial strategies developing processes. Even after performing such an analysis on the selection mechanism and providing evidence of randomization these results need to be used with great caution. For this kind of situation from the many existing possibilities our recommended approach (only when being able to analyze a set of covariates for respondents and non-respondents) is the usage of propensity scoring techniques. Basically, these techniques provide assistance (based on a set of covariates) for practical situations when randomization is unfeasible. Using this approach we compare units from the sample with those that were not selected in the sample trying to obtain evidence that the selection mechanism (selection technique that generated the sample) might be considered similar to randomization. Proving that the selection mechanism involved in a study has enough similarities with randomization provides a broader significance for the results. In this context, using extreme caution, the results obtained from a non-probability sample (sample were random selection was not applied) might be used to construct a quantitative description of the entire targeted population.

## 3. **Methodology**

### 3.1. *Research Goal*

In this research we aim to identify the main determinants of the direct foreign investments in Romania at regional level for the seven regions excluding the Bucharest-Ilfov development region. More precisely, we try to provide a list of the main characteristics of Romanian regions that would influence a foreign investor to choose between different areas when developing his investment strategy. Also we should state very clear right from the beginning that our study will just identify the main factors without providing a clear ranking (even though by analyzing the percentage of companies who declared they considered that particular topic as being important when they decided to locate their investment might provide some serious evidence about a possible hierarchy of the factors from each class). Also through this analysis we try to provide guidance for local authorities in their attempt of attracting direct investments.

### 3.2. *Research design and data collection*

In order to identify these factors and to quantify their importance we employed a statistical research. Administrative data were collected from the Romanian authorities for all direct foreign investments in Romania (in the seven regions). We used five criteria to define our target population: (1) firms that have more than 100 employees; (2) companies that were created between 1990 and 2009; (3) companies that were still operating in 2009; (4) more than 50% of the original investment should be foreign; (5) companies should be activating in the manufacturing industry. Because the volume of the population was quite small (a total number of 669 firms) an exhaustive research was decided to be the correct approach. A survey involving an eight questions questionnaire was conducted over the telephone. The survey was conducted among middle and top managers of the companies which fulfilled our designated criteria. Data obtained from our questionnaires were analyzed using the SPSS statistical software. From the entire target population less than half of the units answered our questionnaire; more precisely we had a total number of 235 valid responses.

### 3.3. Sampling mechanism analysis

The fact that only 235 units decided to fill the questionnaire transformed our exhaustive research in a sampling survey. The main shortcoming was the fact that we could not assume that our sample was random because the action of responding/not responding could not be considered a process which generates randomization. Problematic was also the fact that the response rate in the seven regions was quite different ranging from 45.9% (NE region) to less than 30% (29.7% in the West region).

We decided to split the seven regions in two main clusters based on the amount of subscribed capital and the response rate to our survey. The first cluster consists in four regions: Center – South – South East and West. The total number of respondents for each region and the response rate is as follows: 51 respondents and a 33.1% response rate for the development region Center, 32 respondents and a 31.1% response rate for development region South, 17 respondents and a 31.5% response rate for the development region South East and 43 respondents and a 29.7% response rate for the development region West. These regions are placed second, third, fourth and fifth (Bucharest – Ilfov development region is placed first but it is not included in our research) in the hierarchy based on our decided criteria and they are also characterized by a “low response rate” ranging from 33.1% (Center) to 29.7% (West) as mentioned above. The general response rate for this cluster is 31.4% and the volume of the sample is 143. The remaining three regions form the second cluster (North East – North West – South West) and they rank sixth, seventh and eight in the amount of subscribed capital hierarchy. They also resemble on the response rate having quite high rates ranging from 45.9% to 40.0%. To be more precise the number of respondents and the response rate for each region is: 28 respondents and a 45.9% response rate for the development region North East, 46 respondents and a 42.6% response rate for the development region North West and finally 18 respondents and a 40.0% response rate for the development region South West. The aggregate response rate for this cluster is 43% and the total number of respondents is 92.

In order to give our results a greater reliability we conducted an analysis on the selection mechanism that generated our sample. The main goal of this analysis was to obtain evidences that this mechanism was quite similar to randomization. For all our targeted firms we have received from the authorities a few administrative data that gave us the possibility to construct four variables that we used as covariates in our analysis. The four variables are as follows: (1) dichotomous variable - *technology level of the activity* (High Tech/Low Tech); (2) dichotomous variable – *EU membership of the investor* (EU member/ Non EU member); (3) ordinal three classes variable - *number of employees in 2009* (low number, medium number, large number); (4) ordinal three classes variable – *2009 income* (low income, medium income, high income).

We compared the distributions of these four variables for the sample of respondents for both our clusters with the distributions of the same variables in the initial target population and in the non-respondents sample. We used the Chi – Square and the Binomial tests from the SPSS software package to test the hypothesis that the distributions of the respondents for all four variables do not deviate significantly from their expected distributions (the expected distributions were constructed based on distributions from the target population).

For the first cluster we have no statistical evidence to assume that the obtained distributions (of the respondents) deviate significantly from the expected distributions (distribution of each variable in the population). The *Asymp. Sig (1-tailed)* values for the Binomial test for the first dichotomous variable was 0.35 and for the second one was 0.142 (higher than 0.05). For the last two variables the Chi – Square values were 2.89 (*Asymp. Sig 0.235*) and 1.57 (*Asymp. Sig 0.457*). All tests were performed with a 95% Confidence level. The statistical evidence for the second cluster is

even stronger. In this case we have also no reason to assume that the sampling distribution for any of the four variables is significantly different than the expected one. The Chi-Square test values for the third and fourth covariates are 0.263 (*Asymp. Sig* 0.877) and 0.325 (*Asymp. Sig* 0.850). The *Asymp Sig* (1-tailed) values for the Binomial test is higher than 0.05 for both the dichotomous variables.

Another approach that we used was to construct a propensity score using a logistic regression. The score was constructed to reflect for each unit of the population the probability of being in the sample (there are two possibilities: (1) being in the sample – filling the questionnaire - denoted as 1 and (2) not being in the sample –being a non respondent - denoted as 0) conditioned by the four  $X_i$  covariates. We used the following model for obtaining the propensity scores:

$$e(x_i) = \Pr(S_i = 1 | x_{1i}, x_{2i}, x_{3i}, x_{4i}) \tag{1}$$

$$\hat{e}(x_i) = \frac{1}{1 + e^{-(\hat{a} + \sum \hat{b}_k x_{ik})}} \tag{2}$$

- $Z_i$ = Respondent where  $S_i=0$ , non- respondent or  $S_i=1$ , respondent
  - $x_{1i}$ = Technology level of the activity (*TL*)<sub>(0,1)</sub> where 0= Low tech (LT) and 1= High tech (HT)
  - $x_{2i}$ = EU membership (EUM)<sub>(0,1)</sub> where 0= NON EU member (NON EU) and 1= EU member (EU)
  - $x_{3i}$ = Number of employees in 2009<sub>(1,2,3)</sub> where EMP2009=1 low number of employees, EMP2009=2 medium number of employees, EMP2009=3 high number of employees
  - $x_{4i}$ = 2009 income<sub>(1,2,3)</sub> where I2009=1 low income, I2009=2 medium income, I2009=3 high income
- (3)

$$\hat{e}(x_i) = \frac{1}{1 + e^{-(\hat{a} + \hat{b}_1 TL + \hat{b}_2 EUM + \hat{b}_3 EMP2009 + \hat{b}_4 I2009)}}$$

By doing so we were able to match each non-respondent to a respondent. Further we made the assumption that they have the same behavior regarding their main managerial decisions.

Summarizing, still acting with caution, we can assume that the selection mechanism, the decision of participating to the survey, generated a sample pretty close to a random sample. Therefore we assume that the respondents from both our clusters can be considered as a mirror of the entire cluster. Therefore, based on our data we will proceed further with constructing the profile of the investor emphasizing the elements that fundament the decision to locate the investment in a certain area.

### 3.4. Analyses and Results

Our analysis is focused in this section on the question number six in our questionnaire: “Which were the reasons that made you decide invest in this region?” This question is complex having eighteen sub divisions grouped in four main classes as follows: (1) Infrastructure, (2) Labor force, (3) Concentration factors and (4) Other factors. The answer to all these eighteen questions is a scale with five values: 1 – This factor was not taken in consideration, 2 – Very little importance, 3 – Little importance, 4 – Important, 5 – Very Important. Further in our analysis we have modified the scale for the questions by building a dichotomous variable because the low volume of our two samples. The first class of factors “Infrastructure” includes five topics as follows: (1) transportation costs, (2) quality of the roads, (3) the existences of the airports nearby, (4) the existence of viable land for the investment and (5) favorable conditions for distribution of the products. The only factor that did not provided a significant difference between the two clusters was the fourth, mentioned above. A viable explanation for this reaction from the investors is the fact that utilities for the industrial development were and are still a problem all over the country. Authorities provide little support for potential investors and industrial or technological parks are a rarity in our country. Although very important to note is that 50,7% of the investors from the first cluster and 47,3% of the investors from the second

cluster considered this factor as being important and very important when planning the investment strategy. Transportation costs were not taken in consideration or were of very little importance for 47% of the investors from the first cluster and for over 53.3% from the second cluster. An independent samples t test was performed and the difference between the two groups was found to be significant for a Confidence level of 73%. A viable explanation for this attitude is at hand if we analyze the geographical positions of the two clusters. The first Cluster provides direct access to the Hungarian highways, to the Black Sea, to the Bridge between Romania and Bulgaria, to the Otopeni international Airport and to the two Romanian Highways A1 and A2. Quality of the roads was not considered an important factor in the decision making process by over 65% of the respondents in the first group and by over 81% of the respondents from the second cluster. The difference between the two groups is significant with a confidence level of over 99%. Concerning is the fact that the majority of foreign investors consider that the quality of the Romanian roads is poor, and the authorities do little to improve their quality. The difference between the two clusters might be explained by the factors listed in the above paragraph. 64% of the firms from the first cluster and over 70% from the companies forming the second group have not taken in consideration or have considered as having very little importance to the existence of a nearby airport. An Independent-Samples t test revealed that the difference between the two groups was significant for a level of confidence of over 63%. Even though the difference is quite small it might be explained by the fact that many areas from the first cluster have easier access to the main Romanian International Airport, the Otopeni Airport. However other smaller International Airports are spread all over the country: Iasi (Cluster II), Oradea (Cluster II), Timisoara (Cluster I), Arad (Cluster I), Brasov (Cluster I), Constanta (Cluster I) and Cluj (Cluster II). The distance between the production factory (investment) and the potential customer (5th topic) was considered as a very important factor or as an important factor by 46.4% of the respondents from the first group and only by almost 36% from the respondents of the second cluster. Using the same Independent-Samples t test we get the confirmation that the difference between the two clusters is significant for a Confidence level of over 88%. The difference between the importances granted to this factor might have two explanations. The first consists in the greater quality of the infrastructure from the first cluster and the second might reside in the fact that a significant greater proportion of the companies from the second cluster produce mainly for export.

The second class of factors “Labor force” includes 4 topics as follows: (1) the existence of available labor force, (2) the low cost of the labor force, (3) the existence of qualified labor force, (4) the high level of education of the population. Important to emphasize is that the three topics were considered a major factor in the process of strategic planning (important or extremely important) by over half of the companies from both our clusters. The existence of available labor force is considered a very important factor by about 61% of the respondents from the first cluster and by over 67% from the respondents from the second group. The difference between the two percentages is significant if we use only a 65% Confidence level. The reduced costs of labor force are also a very important factor for both clusters: about 58% from the respondents of the first group and over 64% of the respondents from the second cluster. Using the same Independent Samples t test we get the confirmation that the difference between the two clusters is significant with a 63% Confidence Level. Analyzing the figures from the two last topics, we can assert that the companies that give an increased importance to the labor force are mainly to decide locating their investment in the regions that were aggregated in the second cluster. The existence of qualified labor force was of crucial importance when deciding where to invest for the majority of the companies of the two groups. Over 76% of the respondents from the first group declared that this factor was important and very important in their decision. Also over 66% of the managers from the second cluster showed that this topic was important and very important when the investment decision was made. The difference between our clusters is also significant when using an 88% Confidence level. The results obtained at this question bring a new perspective and more precisely they highlight the fact that investors who are more interested in finding qualified work force than in finding cheap work force are more likely to invest in an area from the first cluster. Finding a population with a high level of education was not considered at all or was considered as having very little importance by only 34% of the respondents from the first cluster and by over 54.5% of the respondents from the second group. The difference between the two percentages was proved to be significant with a Confidence level of over 99%. This result comes to strengthen the findings from the first three topics of this class.

The third class of factors “Concentration factors” was divided into three main topics: (1) The existence of suppliers in the region, (2) The existence of other companies with the same activity field in the region and (3) The existence of other foreign companies in the region. The existence of other foreign investments in the area was not considered or was considered as having very little importance when developing the investment strategy by around 60% of the respondents from both groups. No difference was identified concerning this topic between our two clusters showing

that the majority of the foreign companies choosing Romania for an investment consider the country a trustworthy environment and they do not fundament their decision on other companies' experiences. About 43% of the respondents from the first cluster have not taken into consideration the existence of suppliers in the area and more than 52% of the respondents from the second cluster have not also. Using the Independent – Sample t test we emphasize that the difference between the two clusters is significant if we consider a Confidence level of 81%. This fact might prove to be alarming for local authorities because the horizontal multiplier effect of an investment might be very low in their region. When talking about the existence of other companies with the same activity field in the region about 26.8% of the respondents grouped in the first cluster and more than 34% of the respondents of the second cluster consider this factor as being important and very important in a investment strategy building process. The difference between the two percentages is significant for a 78% Confidence level. Concluding this class of factors we can assert that companies who take into consideration the existence of suppliers in the area of the new investment when planning their strategy are more inclined to invest in the areas forming the first cluster. On the contrary companies that show greater concern to the existence of other companies that work in the same field are more inclined to invest in the regions grouped in the second cluster (all these statements should be regarded carefully and only connected with the provided confidence levels).

The last class, called "Other factors" consists of six unrelated topics as follows: (1) tax incentives for investors, (2) the existence of universities or research centers in the region, (3) low rent levels or low land acquisition price, (4) availability of raw materials at low costs in the area, (5) the existence of a market for their products and (6) operating costs of the company. Tax incentives for investors were not considered at all or were considered as having very little importance by over 60% of the respondents. More precisely over 67% of the respondents from the first cluster and little over 60% from the managers from the second clusters ignored this topic when building their investment strategy (The difference is significant at a confidence level of 72%). The fact that the majority of the investors do not take this fact in consideration when planning an investment in our country shows the low level of concern that local authorities show in foreign investment attraction. Almost 77% of the respondents do not consider important the existence of the Romanian universities or research centers in the area where they plan an investment. The percentage is a little bit larger in the second cluster but the difference between groups is not statistically significant. The Higher Education Romanian system that is not even present in international rankings might be a plausible explanation for this fact. Also we might assume that most companies come bringing their own specialists and know-how in search for cheap labor force. The low level of rents or low land acquisition price was important or very important for over 50% of the investors when they decided to invest in Romania. However important to notice is that there is no significant difference between clusters showing that the entire country is considered as being competitive at this costs. The possibility of buying raw materials at a low price was also not a fact to be taken in consideration for over 55% of the respondents. This result emphasizes the fact that labor force is the main asset of our country. At this topic we do not have a difference in the attitudes of the respondents from the two analyzed groups.

Almost 30% of the respondents from the first cluster considered the existence of a market for their products as being important and very important when planning their strategies. Only a little fewer than 20% of the respondents grouped in the second cluster considered this fact as being important and very important for their future investment. The difference between the two clusters is significant (at a confidence level of 89%) and emphasizes again that companies who decide to invest in the regions of the first clusters come in this country in search of a market also. Companies which considered the operating cost of the future investment as being important and very important chose the regions of the second cluster in a significantly greater percentage. Over 74% of the investors from the second clusters based their strategy on the operating costs levels and only about 66% of the respondents from the first group considered it important and very important (the difference is significant for a 77% Confidence level). Concluding the fourth group of factors we can assert that companies that look for a market for their products are more inclined to invest in the regions of the first cluster and those that are more careful when dealing with costs are more likely to invest in regions of the second cluster.



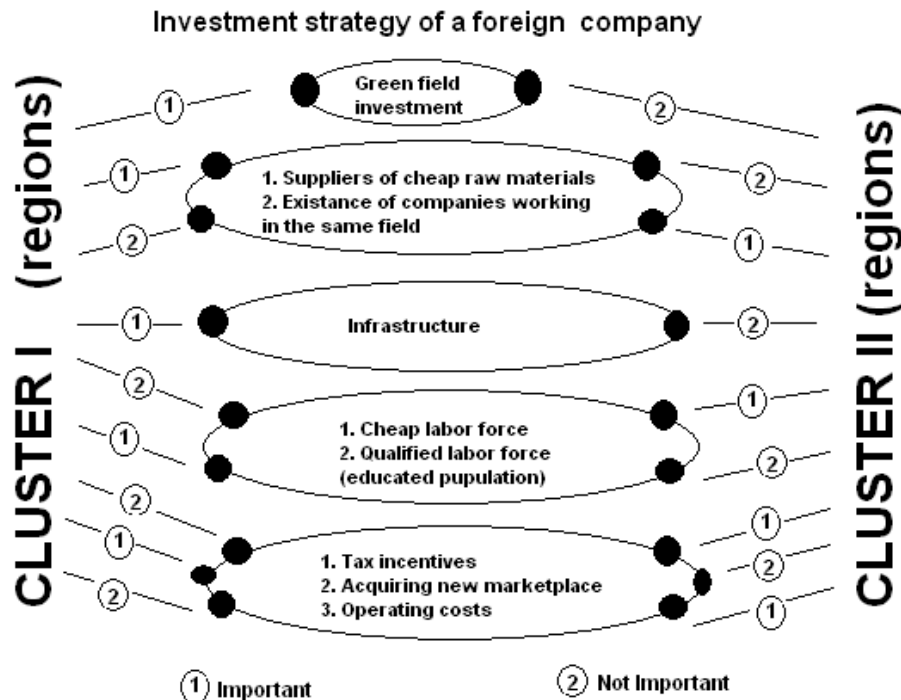


Fig. 2 Investment Strategy of a foreign company in Romanian

Also relevant for the profile of the investor are the results obtained to the first five questions and therefore we will list those results further. Investors deciding to start a green field investment in Romania are more likely to invest in the regions from the first cluster (over 73% of the respondents in the first cluster started a green field investment while only 61% of the second cluster). The difference is significant at a 93% Confidence level. Also important to note is that over 84% of the respondents declare that their products are made for export mainly (over 50% of production).

Noteworthy is also the fact that a significant higher percentage of the respondents from the first cluster declared that the number of employees grew from the start of the investment (over 66% of the total number of respondents declared that the number of employees grew from the start of the investment).

When a company takes into consideration an investment in Romania the location of the future investment (regions of the first cluster or regions from the second cluster) might be decided (in a certain percentage) using among others some of the topics listed in the Figure 2. If a company tends to quantify the importance of each factor in a dichotomous way, all investors who consider one of the topics (factors 1, 2, 4, 6, 8) listed in Figure 2 as being *important* in their strategy will be more likely to invest in the regions from the cluster 1. Also investors who consider the rest of the factors as being *important* in their strategy are more likely to invest in regions from the second cluster.

#### 4. Conclusion

The main findings of our research support (at the level of Romania) what the literature describes as connection between some regional factors and the foreign direct investments. Thereby we can assert that our approach has revealed that foreign investors (concerned by the manufacturing industry) may see Romania as being formed by two different (antagonist) types of regions: Cluster I, proper for those looking for new markets, qualified labor force and infrastructure facilities and Cluster II suited for those more cost oriented (all these conclusions should be regarded carefully and only connected with the provided confidence levels). Although our findings are promising, further study is needed in order to clearly identify which are the most important factors that foreign investors include in their managerial strategy used to locate a future investment in Romania. Noteworthy is also the fact that extrapolation of the results should be done carefully due to the fact that the sample was not generated through a totally random mechanism, even though we proposed some methods that were intended to prove that the selection mechanism was

quite similar to a random one. Also important is the fact that the low level of confidence used when presenting the cluster differences for some of the factors might have as primary cause the reduced volume of the available samples.

Finally, in order to develop a more general framework consisting in a clear and complete description of the main regional factors that influence the foreign direct investments in Romania other surveys based on firms from other fields of activity need to be conducted. Besides we believe that further research, based on some of the present study findings, should focus on developing a quantitative model (using a logistic regression) that would be able to predict where a FDI would be located based on some criteria specified in the managerial strategy. Also we suggest that further study should be concerned with providing a clear ranking of the factors from each class. A starting point for such an approach could be the magnitude of the difference, between the two clusters, for each factor (revealed by the present study) the level of confidence used for each factor and also the percentage of respondents who declared they considered that factor as being an important one when they located their investment.

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