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# Labor Force – Main Determinant Of the Foreign Direct Investments Located in Romania

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## ABSTRACT

*The foreign direct investments can be considered as one of the main factors that have sustained the evolution of the centralized former communist East-European economies into open competitive market systems. The East-European countries were the destination of some significant capital inflow because of some important features of each market as: development level of the infrastructure, labor force characteristics, market size and its future development possibilities, regulation level of the market, liberalization level of the prices, tax policies and technology absorption capability. When talking about Romania one of the main determinants of the foreign direct investments was the labor force, which attracted in the manufacturing industry to types of investors: cost oriented investors and quality oriented investors. The main goal of this research paper is to provide a clear description of the similarities and of the differences of the two investor types, at national and regional. Data used in this research were collected using a questionnaire and were further analyzed using the SPSS software.*

**Key words:** Foreign Direct Investment (FDI), labor force, factor analysis, development region, selection mechanism

**JEL Classification:** J21, J64

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## INTRODUCTION

It is obvious that the investment decision of a foreign firm in a certain area is a multi criteria decision based on a complete analysis of the entire environment (economic, politic, social etc) of a potential host country. Moreover, as Porter states (2003) many of the factors that characterize the economical performance are to be found at regional level and therefore they require a regional oriented analyze.

After the collapse of communism the East European countries showed an increased interest in forging viable strategies designed to attract foreign capital which was identified as being one of the main pillars of a sustainable

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economic growth. Also, the foreign direct investments were considered to be one of the main accelerators of the competitive market construction process.

From this point of view Romania had a similar behavior as the neighbor economies showing important discrepancies in the economic growth rhythm of its regions. Because of the ultra-centralized administrative and political model, the metropolitan area of the capital city (Bucharest) had a superior economic growth rhythm and attracted the majority of the foreign investments. However, different economic growth rhythms are visible when analyzing the other seven development regions of the country and their reasons are not as obvious.

When talking about Romania the labor force can be easily identified as one of the main determinants that have attracted foreign direct investments (in the manufacturing industry) in the Romanian regions. Going further with the analysis the foreign direct investments can be grouped in two main types: (1) investments oriented in finding cheap available labor force, and (2) investments oriented in finding qualified labor force. Starting from this approach we state clear that the main goal of this paper is to construct the profile of the two investor types engaged in the manufacturing industry.

### **THE ADMINISTRATIVE AND TERRITORIAL STRUCTURE OF ROMANIA:**

The change of political regime in 1990 led to changes in the structure of Romania's territorial administration. It was then when Romania chose to separate itself from the old highly centralized system used by the communist states and to align itself to the EU system, based on a policy of regional development. Even though these changes are taking place much slower than in neighboring states (Romania does not have yet a functional regional administrative division according to the EU legislation; it does not have regional administrative units with clear responsibilities and legal personality), in 1998 an eight development regions structure was created. These eight development units, constructed using four criteria (inhabitants number, surface, cultural identity and functional and spatial ties), according to European practice, serve as NUTS II units, while the 41 Romanian counties serve as NUTS III units (according to European practice). The eight development regions are: Nord-East (Suceava, Botosani, Neamt, Iasi, Bacau, Vaslui), South-East (Vrancea, Galati, Buzau, Braila, Tulcea, Constanta), South (Arges, Dambovita, Prahova, Teleorman, Giurgiu, Calarasi, Ialomita), South-West (Gorj, Valcea, Olt, Dolj, Mehedinti), West (Arad, Hunedoara, Caras-Severin, Timis), North-West (Satu Mare, Maramures, Bistrita Nasaud, Cluj, Bihor, Salaj), Center (Alba, Mures,

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Harghita, Covasna, Brasov, Sibiu) and Bucharest-Ilfov (Ilfov and the capital Bucharest).

## LITERATURE REVIEW

The large majority of the literature regarding the primary determinants of regional FDI location indicates that the human capital, the availability and the labor cost play an important role in attracting foreign direct investors into a country.

Muhammad Tariq Majeed and Eatzaz Ahmad (2008) classified the studies regarding the labor force as determinant of FDI localization in two categories based on the importance of the human capital. The first uses datasets that cover the period between the 1960s and 1980s when the human capital did not have a significant effect on FDI location, while the second is based on datasets between the 1980s and mid-2000s when the human capital became a significant determinant of inward FDI. FDI became more knowledge- and skill-intensive in recent years.

### Romanian administrative structure at 1<sup>st</sup> of January 2009

*Fig. no. 1*



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Root and Ahmed (1979) show that among the 58 developing countries, none of their proxies for human capital: literacy, school enrolment, and the availability of technical and professional workers, are statistically significant determinants of inward FDI. Schneider and Frey (1985), using data for 54 developing countries for the years: 1976, 1979, 1980, find the share of an age group with secondary education to be a less significant determinant as compared with other economic and political influences. Hanson (1996), using a sample of 105 developing countries, shows that the adult literacy rate was not an important determinant of FDI as compared with other socio-political variables. Finally, Narula (1996) demonstrates that the percentage of tertiary educated people was not a statistically significant explanatory variable for FDI inflows among the 22 developing countries. Thus, all four cross country studies show that human capital is not necessarily an important input for inward FDI. These results are consistent with the fact that the FDI was concentrated in the period of the 1960s to 1980s on markets where cheap labor and abundant natural resources were available (Deyo, 1989; Ritchie, 2002; and Dunning, 2002).

The second class of studies, based on datasets between the 1980s and mid-2000s include the following studies elaborated by: Friedman et al. (1996), Noorbakhsh et Paloni (2001), Nunnenkamp and Spatz (2002), Qian Sun et al. (2002) and Kang and Lee (2007). Using a dataset that covers the 1980s to mid-1990s, Noorbakhsh et al. finds that the human capital has a statistically significant and positive effect on FDI inflows. Indeed most MNEs operating in developing countries during the late 1980s and 1990s tend to be efficiency-seeking types (Dunning, 2002; Nunnenkamp and Spatz, 2002) and therefore high skilled labor force is expected to be crucial. Using an indicator that quantifies the average number of education years for the population aged 15 and above, for 28 developing countries, Nunnenkamp and Spatz find that education became an increasingly important determinant of FDI from the mid-1980s to the late 1990s. Thus, these studies indicate that human capital is an important determinant for inward FDI especially among efficiency-seeking MNEs, while not being an important determinant among market or resource-seeking MNEs.

Focusing on the factors motivating the location choice of foreign firms establishing manufacturing branch plants in the United States, Friedman et al. (1992) found that market potential, wage level, the existence of skilled labor measured through number of scientists and engineers, construction cost, the existence of major ports and funds spent on attracting FDI have significant impact on the location of foreign branch plants in the US.

Qian Sun et al. (2002) analyzing the spatial and temporal variation in foreign direct investment among China's 30 provinces from 1986 to 1998,

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found that the labor quality and infrastructure are important determinants of the distribution of FDI.

Similarly, Kang and Lee (2007), studying 26 Chinese regions based on the data which covers the period of 1988–2002, found that market size and government policies regarding economic zones, quality of labor, and transport infrastructure have a positive and significant effect on FDI location.

The theories regarding the labor cost as FDI determinant are even more debated. Labor cost is found to be positively related to FDI by Wheeler and Mody (1992) and Feenstra and Hanson (1997) however the effect is negative for Culem (1988), Glickman and Woodward (1988), Barrell and Pain (1999a) and insignificant for Ondrich and Wasylenko (1993) and Lucas (1993).

The lack of consensus in the literature may suggest that the relevance of these FDI determinants may depend on location.

Recently a large number of papers having a regional focus were published. Crozet, Mayer and Mucchielli (2004) studied the determinants of FDI location using data gathered at the level of 92 French departments and their results showed that Paris and the regions near the borders were major recipients of FDI. As shown by this study the market size and agglomeration have a positive influence while the wages level has a negative one.

Boudier-Bensebaa (2005) shows, conducting a regional level analysis, that FDIs in a small country like Hungary are highly concentrated, in regions around Budapest and she also finds that unemployment rate (labor availability), local market size and agglomeration effects have a positive and significant effect on FDI location.

Studying the FDI location decisions in four transition countries (Poland, Hungary, Romania and Bulgaria), at NUTS 2 regions level, for 4103 manufacturing foreign investments during the 1990s, F.Pusterla & L.Resmini (2005) found that the foreign firms which operate in low tech fields prefer locations with abundant and cheap labor force, while companies activating in high tech fields are more interested in the existence of skilled and qualified work force.

Analyzing the regional determinants of FDI distribution in Poland, A.Chidlow and S. Young (2008) showed that there are substantial differences in the attractiveness of Polish regions when talking about FDI and that the investments are highly concentrated in the Mazowieckie area where the capital city Warsaw is located. They also found that the investors decided for other regions than the Mazowieckie area because of the low input costs, the availability of labor force, natural resources and other geographical factors

Analyzing the regional characteristics that explain spatial patterns of foreign direct investments in EU27 regions during the period 2005-2007, L.

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Resmini & L. Casi(2010) found that human capital played a crucial role in attracting FDI, while labor cost was not a significant factor.

Boermans, Roelfsema, Zhang (2011) and Chen (2011) showed also in their studies that foreign investors are attracted in China by provinces with low labor cost, large market size, and good transportation and communication infrastructure.

Liu et all (2012) showed that there is an uneven regional distribution of FDI inflows into China which is caused by the differences in regions' characteristics. The location determinants in coastal and northeast regions are quite similar and the results reveal that market size, labor quality, and government incentives to attract FDI have a significant and positive effect in attracting FDIs, while high labor costs have the opposite effect in these regions.

## **RESEARCH GOAL**

As we have already stated throughout this paper, foreign direct investment in Romania, in the manufacturing sector, can be classified according to the type of labor force that brought them in one of the regions of our country in two major types: investment attracted by cheap workforce and investment attracted by skilled and educated workforce. Based on this binary classification process of the foreign direct investments in Romania, in the manufacturing sector, we have tried in this paper to build the profile of the two types of investors, highlighting differences and similarities, both at regional level and at national level. We also state clear that the present study has an exploratory and descriptive character and is not trying to provide a ranking system of the most important determinants of foreign direct investments for the two types of investors. Through the proposed approach we intend to offer aggregated information that can be used by local authorities when performing a SWOT analysis with the purpose of describing the view of the foreign investors about a region or group of regions.

## **DATA COLLECTION AND SELECTION MECHANISM ANALYSIS**

The data used in this study were collected through a survey of a larger scale began in 2010, and the whole process was conducted according to the methodology that will be presented further. In the first stage of the present study, we decided to exclude the Bucharest-Ilfov region because it has shown (as we have already mentioned) a superior attraction to foreign direct

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investments than all the other seven regions. Then five criteria were established in order to clearly identify in terms of spatial and temporal coordinates the target collectivity. The five criteria are the following: (1) Firms with more than 100 employees, (2) Firms established between 1990 and 2009, (3) Firms that are still operating at the 1<sup>st</sup> of January 2009, (4) Firms that were established using foreign investments (more than 50% of the initial investment should have been foreign), (5) Firms activating in the manufacturing sector.

After having these restrictions clearly described a database containing the identification information and the contact details for the firms that met these five criteria was sought and obtained from the Romanian authorities. Because the received list contained only 669 companies it was decided to conduct an exhaustive investigation instead of a random sample survey. Using information about the main determinants of FDI identified in the literature we have constructed a questionnaire with six simple questions and one complex question, having eighteen items (grouped into four broad categories: infrastructure, labor, concentration and other factors) describing the factors considered by investors when choosing the location of the future investment. Important to note here is that the structure of the questionnaire took into account the profile of the respondents (persons with management functions in the companies from the target collectivity) and the method chosen for data collection.

In total only 235 managers from those questioned answered sending a valid questionnaire and thus our approach became one based on a sample survey. In these circumstances analyzing the sampling mechanism became extremely important if the concept of statistical representativeness is to be used in connection with the obtained results characterization results. It is obvious that the selection mechanism based on managers' decision to respond or not to respond can not be considered a random selection mechanism. Furthermore, the response rate (table 1.) with a large range (analyzed at regional level), should be seen as another sign that the selection mechanism can not be considered as one that generates a random sample.

**The response rate for the seven development regions**

*Table no. 1*

		<b>Firms</b>	
		<b>Non-Respondent</b>	<b>Respondent</b>
<b>Region</b>	<b>Center</b>	66.90%	33.10%
	<b>North-East*</b>	54.10%	45.90%
	<b>North-West*</b>	57.40%	42.60%
	<b>South</b>	68.90%	31.10%
	<b>South-East</b>	68.50%	31.50%
	<b>South-West*</b>	60.00%	40.00%
	<b>West</b>	70.30%	29.70%
<b>General</b>		64.90%	35.10%

Source: authors' work

Also due to the significant differences among the response rates (for different regions) we decided not to perform the analysis at regional level. However, we decided to build a new level of aggregation, consisting of two clusters, under the national level, using two criteria: (1) the response rate and (2) the total amount of initial investment of the foreign investors.

*Cluster 1* – regions no. 2, 3, 4, 5 according to the total amount of the initial investment – with a “low” response rate: Center, South, South-East and West.

*Cluster 2* – regions no. 6, 7, and 8 according to the total amount of the initial investment – with a “high” response rate: North-East, North-West and South-West.

The proposed approach used in order to obtain some evidence to support the claim that the selection mechanism involved in the construction of the sample is somewhat similar to a simple random selection, involved an analysis at national level and also at the level of the two clusters. The proposed methodology involved two steps, the first based on non-parametric tests and the second using a propensity scores technique. Conceptually, both techniques used are based on the same assumption, namely that of obtaining some form of evidence that the respondents' distribution is not significantly different from that of non-responders regarding a number of available control variables. The four control variables used were constructed using information available for all units of the target population received from the authorities. These are: (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).

Hypotheses testing based on Mann-Whitney test and Chi-Square test was the first technique employed. The obtained results, listed in table 2, prove that there is not enough statistical evidence, both at national level and at the clusters level, using a 95% confidence level, to reject the hypothesis which states that there are no statistically significant differences for any of the four control variables between the group of respondents and the one of non-respondents.

### Respondents versus Non-respondents

Table no. 2

National level				
	HT - LT	UE – Nn-UE	A2009	Ven2009
Mann-Whitney U	48275	49447.5	47400	49340
Wilcoxon W	76005	144277.5	75130	77070
Z	-1.60372	-1.15772	-1.75461	-1.22354
Asymp. Sig. (2-tailed)	0.10878	0.24698	0.07933	0.22113
Cluster 1				
Mann-Whitney U	21793	21237	20386.5	21198
Wilcoxon W	32089	70378	30682.5	31494
Z	-0.58437	-1.42705	-1.73813	-1.49992
Asymp. Sig. (2-tailed)	0.55897	0.15357	0.08219	0.13364
Cluster 2				
Mann-Whitney U	5148	5570	5308	5598.5
Wilcoxon W	9426	9848	9586	9876.5
Z	-1.56320	-0.16285	-0.75509	-0.04924
Asymp. Sig. (2-tailed)	0.11800	0.87064	0.45019	0.96072

Source: authors' work

The second method consisted of using a propensity scores technique (Rosenbaum and Rubin proposed the propensity scores technique in 1983). Thus, we calculated for each unit of the target population a score as a probability of being a respondent, conditioned by the four available control variables (covariates). After estimating this score, using a matching technique (used in the construction of matched samples) we attempted to pair each non-respondent with at least one respondent. The main goal of this technique was to obtain enough evidence to show that the probability of obtaining a sample of non-responders that does not allow each unit (non-respondent) to be matched with at least one respondent is zero.

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After using the matching mechanism we identified eight scores (corresponding to non-respondents) which did not allow matching (below 1.2% of the target collectivity units have no equivalent among the respondents). Under these circumstances we can not conclude that our sample is similar to one obtained from the use of a random selection mechanism. Given this inability to use the concept of statistical representativeness we clearly state that the results of this study should be regarded as an exploratory research, namely as a starting point for future research.

### **COST VERSUS QUALITY – FDI TYPES:**

The importance of the labor related factors in attracting foreign investment in Romania can not be doubted, but requires a more thorough investigation because of its complexity. For this study we tried to build a mechanism to allow segregation of the sample units in companies that have been attracted to a greater extent by the availability of **cheap labor** and firms that were attracted to a greater extent by the existence of **qualified labor**.

In our questionnaire items related to the workforce were (“What were the reasons that made you invest in this region?”) as follows: (1) the existence of available labor, (2) the low cost of labor force, (3) the existence of qualified labor, (4) the high level of education of the population. The importance of each of the four labor related factors, as shown in table no 3, both at national level and at the clusters level, in the location choosing process supports the hypothesis that labor related factors were crucial in attracting foreign direct investments in Romania.

#### **The importance of the 4 labor force related items**

*Table no. 3*

<b>Labor force</b>				
<b>Region</b>	<b>I1</b>	<b>I2</b>	<b>I3</b>	<b>I4</b>
<b>Cluster I</b>	86.7%	80.4%	75.5%	42.7%
<b>Cluster II</b>	91.3%	82.6%	66.3%	17.8%
<b>National level</b>	88.5%	81.3%	71.9%	32.8%

Source: authors' work

Using the SPSS software package a factor analysis was performed and the first two factors were retained (responsible for about 75% of the variance in the original items): the first related to the last two items (Type 1: Firms oriented towards qualified workforce) and the second correlated with the first two items (Type 2: Firms oriented towards cheap labor). The scores of the two factors on each of the units were constructed using the regression method

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available in SPSS. Each unit was assigned to one of two types according to the relationship between the two scores (Ex: unit X was assigned to type 1 if the score of the first factor was higher than the score of the second factor).

**The scores used in classifying the firms in two types**

*Table no. 4*

Rotated Comp. Matrix			Comp. Scores Coefficient Matrix	
	Factor		Factor	
	1	2	1	2
<b>Item 1</b>	0.2217	0.7908	0.0489	0.5659
<b>Item 2</b>	-0.0496	0.8571	-0.1491	0.6521
<b>Item 3</b>	0.8435	0.1139	0.5731	-0.0269
<b>Item 4</b>	0.8492	0.0406	0.5869	-0.0829

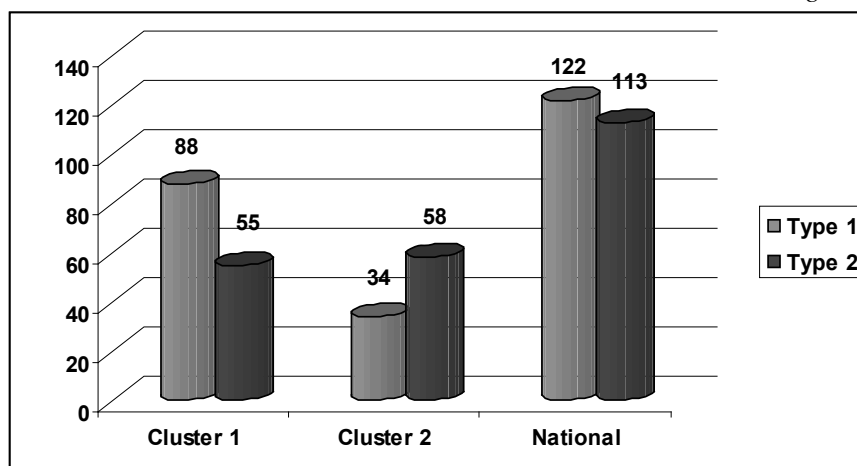
Source: authors' work

**INVESTORS' PROFILES**

In terms of the total number of investments we can not say that there is any significant difference between the two types at national level. However, at the regional level we find that the first cluster is more attractive for companies looking for skilled workers, and the second cluster is more attractive for firms oriented to find cheap labor. As it was expected another important distinction is that the first cluster is more attractive for investors than cluster 2. Going with the analysis at regional level, we identify the Central, and West (33 investments and 30 investments) as the most attractive destinations for type 1 firms and the North-West and North-East as favorite destinations for type 2 investor (31 investments and 18 investments).

### Firms' distribution by type – Cluster level and national level

Fig. no. 2



Source: authors' work

When talking about the way the foreign firms entered the market there are slight differences between the two types of firms, but they are not statistically significant either nationally or at the clusters level, so we can not identify a preferred way to enter the market condition by the type.

### Investment type Brown field/Green field

Table no. 5

Investment type	National level			Cluster 1			Cluster 2		
	Type 2	Type 1	Total	Type 2	Type 1	Total	Type 2	Type 1	Total
<b>Brown field</b>	33.93	29.17	31.47	30.90	24.40	27.00	36.80	41.20	38.50
<b>Green field</b>	66.07	70.83	68.53	69.10	75.60	73.00	63.20	58.80	61.50

Source: authors' work

Not even when talking about the destination of the production (export or domestic market) we don't have significant differences between the two types of firms. However, at the level of the second cluster the registered differences are significant for a confidence level of 90%, more exactly 91.4% of the type 2 firms have a production primarily for export and only 76.5% of those of type 1 produce mainly for export.

When talking about the intention to expand or not the investment in the future there are significant differences (at a confidence level of 95%) between the two types of firms, a significantly higher percentage of firms

who sought skilled labor (type 1) are interested in an investing in a future development of their facility. The difference is obvious both at national level and at the clusters' level. The differences revealed by this analyze may support the hypothesis that some of the companies that have chosen a Romanian region mainly for cheap labor may consider relocating their investment when the advantage of our country will fade. On the contrary, firms that chose a particular Romanian region for the existing skilled workforce consider their investment as a foothold in whose development they want to invest in the future.

### Future development of the investment

Table no. 6

Future development of the investment (%)	National level *			Cluster 1*			Cluster 2*		
	T2	T1	Total	T2	T1	Total	T2	T1	Total
Yes	65.20	<b>78.50</b>	72.10	65.50	<b>78.20</b>	73.20	64.90	<b>79.40</b>	70.30
No	34.80	21.50	27.90	34.50	21.80	26.80	35.10	20.60	29.70

Source: authors' work

Further we will present the differences / similarities between the two types of investors in terms of the importance they have given, when they have analyzed the opportunity of a future investment in a Romanian region, to all the factors included in our study, excepting those related to employment. The first class of factors is related to infrastructure: (1) transportation cost, (2) good quality of the roads, (3) the existence of nearby airports, (4) the possibility to use (in terms of utilities and infrastructure) the land in the region and (5) geographical favorable conditions for distribution of the products. The analysis carried out at national level (table no. 7) shows clearly that type 1 firms (the skilled labor oriented firms) consider as being very important in a larger percentage the factors related to infrastructure. However, in terms of statistical significance (for a 95% confidence level) the differences are significant only for the first two factors: transport cost and good quality of the roads. The significantly higher percentage of type 1 firms that see these factors as having a higher importance can be explained by the fact that these companies consider the investment as one with potential for future development and not strictly as a production unit which can be relocated when the advantage of low-wage labor will fade.

### The importance of the infrastructure related items

Table no. 7

Infrastructure related factors	National level									
	Item 1 (%)*		Item 2 (%)*		Item 3 (%)		Item 4 (%)		Item 5 (%)	
	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1
Low importance	69,6	54,5	94,6	84,4	80,4	72,1	55,4	46,7	63,7	53,3
High Importance	30,4	<b>45,5</b>	5,4	<b>15,6</b>	19,6	27,9	44,6	53,3	36,3	46,7

Source: authors' work

Going forward with our analysis, we identify different behavior of the firms at the level of the two clusters from our sample. Thus, in the first cluster, firms interested in skilled labor consider in a greater percentage all the items as being very important. Significant differences are recorded this time, at the level of the first and of the third item. As for the second cluster, the differences are not statistically significant (for a 95% confidence level) to any one of the items. Notable for the second cluster is that type 2 firms regard items 3 and 4 as being very important in a greater percentage than firms that are oriented towards skilled workforce.

However, when talking about the importance given to the infrastructure related factors, we can conclude that firms that chose Romania for the existence of skilled labor consider these factors as being very important in a higher percentage.

### The importance of the infrastructure related items (Cluster level)

Table no. 8

Infrastructure related factors	Cluster 1									
	Item 1 (%)*		Item 2 (%)		Item 3 (%)*		Item 4 (%)		Item 5 (%)	
	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1
Low importance	76,4	52,3	92,7	83,0	83,6	69,3	58,2	44,3	61,8	50,0
High Importance	23,6	<b>47,7</b>	7,3	17,0	16,4	<b>30,7</b>	41,8	55,7	38,2	50,0
Infrastructure related factors	Cluster 2									
	Item 1 (%)		Item 2 (%)		Item 3 (%)		Item 4 (%)		Item 5 (%)	
	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1
Low importance	63,2	60,6	96,5	88,2	77,2	79,4	52,6	52,9	65,5	61,8
High Importance	36,8	39,4	3,5	11,7	22,8	20,6	47,4	47,1	34,5	38,2

Source: authors' work

Using the same approach, we will present further the profile of the two types of investors in terms of their behavior towards aspects related with agglomeration. In the used questionnaire items that addressed the problem of agglomeration were the following: (1) the existence of raw materials' suppliers in the region, (2) the existence of companies activating in the same field and (3) the existence of other foreign companies operating in region.

Regarding agglomeration factors, the only significant difference, at national level, with an 85% confidence level is the one related to the third item (type 2 firms prefer in a greater percentage to choose areas where other foreign companies have already settled). Only as an observation (without the differences being statistically significant) we note that at national level companies interested in skilled manpower regard the agglomeration factors as having high importance in a higher percentage than companies oriented towards cheap workforce. Also, the only item which has been found to be considered as being very important by a higher percentage of the type 2 firms than those of type 1 is the first, at the level of the second cluster.

### The importance of the agglomeration related factors

Table no. 9

Agglomeration factors' importance	National level					
	Item 1 (%)		Item 2 (%)		Item 3 (%)**	
	T2	T1	T2	T1	T2	T1
Low importance	67,3	67,2	71,7	69,7	78,8	74,5
High Importance	32,7	32,8	28,3	30,3	21,2	25,5
Agglomeration factors' importance	Cluster 1					
	Item 1 (%)		Item 2 (%)		Item 3 (%)	
	T2	T1	T2	T1	T2	T1
Low importance	70,9	67,0	74,5	72,7	76,4	70,5
High Importance	29,1	33,0	25,5	27,3	23,6	29,5
Agglomeration factors' importance	Cluster 2					
	Item 1 (%)		Item 2 (%)		Item 3 (%)	
	T2	T1	T2	T1	T2	T1
Low importance	63,8	67,6	69,0	61,8	81,0	70,6
High Importance	36,2	32,4	31,0	38,2	19,0	29,4

Source: authors' work

Regarding the existence of universities and/or research centers in the region, this item does not allow us to observe a significantly (statistically speaking) different behavior between the two types of firms, neither nationally nor at the level of the two clusters. Important however, in this case, is that firms which

came in Romania to seek skilled workforce show greater attention to this aspect in a higher percentage, both nationally and at the level of the two clusters.

### The importance of the existence of a potential market

Table no. 10

The existence of a potential market	Respondents					
	General*		Cluster 1**		Cluster 2	
	T2	T1	T2	T1	T 2	T1
Low importance	81,4	68,9	78,2	67,0	84,5	73,5
High Importance	18,6	<b>31,1</b>	21,8	<b>33,0</b>	15,5	26,5

Source: authors' work

Significant difference between the behaviors of the two types of firms is registered on the attitude towards the existence of a potential market in selected region. Thus, a significantly higher percentage (for a 95% confidence level) of type 1 firms, at national level, attaches a high importance to the existence of a potential market. This trend is maintained at level of the two clusters, namely the difference remained significant in the first cluster for a confidence level of only 85%.

In terms of cost related aspects the only item that indicates a significant difference in behavior between the two types of firms is related to the low acquisition price of land or rents. Type 2 firms (those in search of cheap labor) grant in a significantly higher percentage (using a 95% confidence level) a high importance to this aspect. The difference remains significant at the clusters' level: for an 89% confidence level in the case of the first cluster and for a level of over 90% in the case of the second one. Also noteworthy is the fact that at national level this aspect is the only one considered by a larger percentage of the type 2 firms as being very important.

Without being a statistically significant difference it is notable that a higher percentage of the type 1 firms considered Bucharest-Ilfov region as an alternative when they have decided where to locate their investment.

As it was expected type 1 firms have in a significantly higher percentage a "market seeking" behavior than those oriented towards cheap workforce, which are characterized more by an "efficiency seeking" behavior.

## CONCLUSION

The results of our study reveal that there are significant differences at regional and also at national level between key drivers that motivated foreign investors (type 1 and type 2) from the manufacturing sector to locate their investments in Romania. Therefore the assumption that investors who chose Romania can be clustered into two main types with significantly different



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behaviors depending on the preference shown for a particular type of labor is confirmed.

Also a notable result is the fact that Romania was a favorable destination for types of investors, those seeking skilled workforce as well as those interested in available and cheap labor (122 type 1 investors and 113 type 2 investors). Conducting the analysis at regional level we observed that type 1 investors prefer in a significantly higher percentage regions from the first cluster and the type 2 investors are oriented in a higher percentage towards regions from cluster 2.

Other noteworthy results are those showing that type 1 investor prefer to invest in a green field facility and also have in mind to develop their facility in the future in a higher percentage than type 2 investors. Also notable is that the investors brought in Romania by the existence of qualified and educated workforce declare in a significantly higher percentage that infrastructure (items 1 and 2) was very important in the location process of their investment and also the existence of a potential new market was very important in that process. As it was expected, the results confirm, that the Bucharest-Ilfov region was an option for a higher percentage of type 1 investors.

It is very important, that the results presented in this research paper should be regarded with caution (in terms of statistical representativeness) because the selection mechanism of the units in the sample was not a completely random one and also because the response rate was quite heterogeneous at regional level.

However, the results of this research paper may provide a basis for future similar research conducted in other economic areas and they can also be the foundation of future regional policies developed by the authorities in order to attract foreign direct investment.

As a final remark we have to mention that the analysis can be performed for different structures of the development regions, in the current administrative reorganization process from Romania, because the data are available for each county.

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