

# ***A RESOURCE-BASED VIEW OF COMPETITIVE ADVANTAGE OF CITIES***

*Empirical Results on Headquarter Advantages of Vienna in Central Europe*

Josef Windsperger

Associate Professor of Organization and Management

Center of Business Studies

University of Vienna

Brünner Str. 72

A-1210 Vienna

Austria

Email: josef.windsperger@univie.ac.at

*Published in SEE Journal of Economics and Business, Vol. 2, 2006*

## **Abstract**

We develop a resource-based approach of the competitive advantage of cities by combining Porter's diamond model with the resource-based view of the firm. Locations may realize sustainable competitive advantage, if they offer resources and competencies that are difficult to transfer to and imitate by other locations, and if these resources are complementary to the core competencies of multinational firms. By integrating Porter's model with the resource-based view we can better analyse the competitive advantage of locations, because – in addition to Porter's diamond model – our approach includes the interaction effects (complementarities) between firm-specific and location-specific resources. Location-specific resources influence the attractiveness of locations for multinational firms, and investments of multinationals stimulate the development of location-specific resources and capabilities. We present some empirical results for Vienna as headquarter location in Central Europe.

\* A first version of this paper was presented at the SymposiumCEE at the University of Vienna, November 2004. Financial support was provided by the 'Hochschuljubiläumsstiftung' of the City of Vienna.

## **1 Problem**

Human capital, specific know-how, cultural and institutional resources are becoming more and more important to generate competitive advantages of nations, regions and cities. Researchers in economics of development and geography have discussed different views regarding their importance for achieving local competitive advantages (Glaeser 1999; Glaeser, Saiz 2003; Berry, Glaeser 2005; Florida 2002, 2005; Peck 2005). On the other hand, as Dunning (1998) argued, the internationalization theories - based on the theories of the firm and industrial organization from the 1970ies and 1980ies - do not take into account the location-specific resources as drivers of long-term competitive advantages of multinational corporations. Location factors are the basis for competitive advantage, if they cannot be easily transferred to and imitated by another location, and if they complement the competencies of the multinational firms (Foss 1996; Anderson 1985). These resources are called location-specific resources (Rugman, Verbeke 1992). The competitive advantage of a location (city/region) can be influenced by the location policy, if it aims at improving the competitive position of a location by developing and upgrading the location-specific resources and capabilities (Blakely 2001). Thus the location policy has a strategic function in international competition (Kotler et al. 1993; Sassen 2000). In this paper, we develop a resource-based approach to analyse the competitive advantage of a city by combining the Porter-model (Porter 1990; 1998a) with the resource-based view of the firm. We derive the following thesis: A city as headquarter location for multinational firms will achieve a competitive advantage, if it offers location-specific resources that generate sustainable competitive advantages for the multinational firms. In addition, we present empirical results for Vienna as headquarter location of multinational firm for Central, East and South East Europe (CEE, SEE).

The paper is organized as follows: Section two gives an overview of the relevant literature. First we present Porter's diamond model. He explains why multinational companies (MNCs) invest in certain nations/regions. MNCs invest in certain nations/regions/cities if these locations offer economic conditions which increase their competitive advantage. Furthermore, we discuss extensions of this diamond model. In particular, we present research results regarding the relationship between firm-specific resources and competitive advantage of regions. In section three we develop a resource-based approach of competitive advantage of cities by integrating Porter's diamond model with the resource-based theory of the firm. Finally, we present empirical results on headquarter advantages of Vienna in Central Europe.

## **2 Relevant Literature**

### **2.1 Porter's Diamond Model**

According to Porter's diamond model (Porter 1990), the competitive advantage of a nation/region is influenced by the following determinants: Factor conditions, demand conditions, related and supporting industries, and context for firm strategy, structure and rivalry. Factor conditions refer to specific human capital, technological know-how, communication and transport infrastructure, but also to traditional factors, such as land, labour, natural resources and capital. Porter differentiates between basic and advanced factors: Basic factors are natural resources, climate and geographic location of a region and less-qualified human capital. Competitive advantages based on elementary factors are less sustainable, because they can be easily imitated by other locations. The advanced factors are decisive for the local competitive advantage since they cannot be

easily imitated by and transferred to another location. They can be upgraded by investments of the multinational firms and of other institutions (government, chambers, trade associations). Examples are high-qualified human capital, specific research facilities, management and technological competencies, and communication infrastructure. Additionally, the demand conditions influence the competitive advantage of a region or city. High and sophisticated local demand results in more product innovations and thus improves the firm's international competitiveness. Related and supporting industries may increase the firm's competitive advantage if the suppliers offer new technologies and products that are not available for competitors. The fourth factor of the 'diamond model' refers to the firm strategy, structure and rivalry. Porter argues that new strategies and strong rivalry between local companies create strong incentives for new product and organizational innovations. Strong local rivalry improves the firm's competitive capabilities in international markets. These four determinants ('pillars') of the diamond model are further influenced by two other factors: Government and chance. The government can influence the competitive advantage of a location by incentives and regulations that stimulate the creation and upgrading of these factors. Porter's model was successfully applied in many empirical studies (Enright, Weder 1995; Porter et. al 2000; Sölvell et al. 1991; Steinbock 1998).

Rugman & Verbeke (Rugman, Verbeke 1992, 1993, 1998, 2003) extend Porter's model by differentiating between country- (location-) and firm-specific resources. Firm-specific resources are strategic assets that generate sustainable competitive advantage (Barney 1991; Amit, Schoemaker 1993). Furthermore, they differentiate between two types of firm-specific resources, namely between non-location and location-specific resources. The latter are the basis for local competitive advantages, because they cannot be easily transferred to and imitated by another location (Foss

1996; Lawson, Lorenz 1999). In the international competitive environment locations (regions/cities) can only improve their competitiveness, if multinational firms can realize location-specific competitive advantages. Hence the interaction effects between location-specific and firm-specific resources influence the competitive position of the MNC. Grant (1991) and Feldman & Francis (2000) criticise Porter's model because he does not consider the interaction effects between the 'pillars' of the diamond, on the one hand, and the strategy of the multinational firm. In particular, the interactions between the advanced factors (such as specific human capital and know-how) and the firm-specific resources and capabilities of the MNCs are very important for the creation of sustainable competitive advantages. Porter mentioned this theoretical deficit (Porter 1998c; 2000, 41; 2000) but has not offered a solution.

## **2.2 Firm-specific Resources and Location-specific Advantages**

Following Enright (1998), Foss (1996), O'Donnell & Blumentritt (1999), Maskell & Malmberg (1999), Spender (1998), and Fahy (2002), the resource- or competence-based theory of the firm offers a new starting point for the explanation of location-specific advantages (Barney 1986; Wernerfelt 1984; Collis 1991; Grant 1991a, Rumelt 1984; Prahalad, Hamel 1990; Foss, Knudsen 1996). The resource-based approach views the firm as bundle of resources and organizational capabilities (competencies), which are difficult to imitate and substitute (Barney 1991; Peteraf, Barney 2003). Competencies refer both to static resources and dynamic capabilities (Amit, Schoemaker 1993; Teece et al. 1997). The latter refers to the change of organizational capabilities (learning and innovation capabilities) (Prahalad, Hamel 1990; Eriksen, Mikkelsen 1996). This approach will be used to identify location-specific resources.

The same way as firms achieve competitive advantages (strategic rents) by investing in resources and capabilities that are difficult to imitate and transfer (Winter 1995; Makadok 2001), locations (regions/cities) can improve their competitive position by investing in location-specific resources. Location factors are location-specific, if they cannot be easily transferred to and imitated by another location (Foss 1996; Lawson 1999).

O'Donnell & Blumentritt (1999) and Maskell & Malmberg (1999) argue that interaction effects exist between firm-specific and location-specific resources. A city or region can realize a sustainable competitive advantage if it offers location-specific resources that are complementary to the firm-specific resources of the multinational firm and thus they contribute to the know-how upgrading. O'Donnell & Blumentritt show that firm-specific resources result in know-how upgrading of a region/city and – in a dynamic view – location-specific resources increase the attractiveness of the location for investments of MNCs. Therefore, complementarity between firm-specific and location-specific resources exists. Location-specific advantages, which result from spill-over effects of MNCs' investments in firm-specific resources and capabilities, can be further increased by the 'snow-ball'-effect (Dugan 2000, 39), because the attractiveness of these locations stimulates further investments of MNCs (Scott 2000; Fujita, Thisse 2000). The more important the strategic decision making role of the local headquarter of the MNCs, the more the MNC will invest in firm-specific resources and capabilities at the headquarter location, and the higher is the extent of location-specific know-how upgrading (Malecki 1999; Florida 1996). Consequently, we can conclude that the interactions between firm-specific and location-specific resources can only be examined if we apply the resource-based view of the firm to evaluate the strategic importance of location factors.

### **3 Competitive Advantage of Cities: A Resource-based Approach**

Now we develop a resource-based view of competitive advantage of cities by combining Porter's diamond model with the resource-based theory of the firm.

#### **3.1 Complementarity between Location-specific and Firm-specific Resources**

Following the resource-based view of the firm sustainable competitive advantages can be realized, if the companies have firm-specific resources and competencies resulting in long-term profit advantages (as strategic rents) compared to the best competitors (Peteraf 1993; Peteraf, Barney 2003). These resources and capabilities enable the firms to succeed in a dynamic international environment. In order to develop a resource-based approach of competitive advantage of cities, we have to answer the following questions: (1) What is the relationship between the 'pillars' of the Porter's diamond model and the firm-specific resources for the creation of sustainable competitive advantages of the MNC, and (2) how can the location policy influence the headquarter advantages? Only if we can show that the determinants of the diamond influence the resources and capabilities of the firm and hence its competitive position, we can derive a resource-based location policy.

Resources and capabilities that generate competitive advantages may be location- or non-location-specific (Rugman, Verbeke 1992). Location-specific and non-location-specific resources refer to the factor conditions in the diamond model (see figure 1). Location-specific resources result in local competitive advantages, if they are complementary to the firm-specific resources and capabilities of the multinational firm

(Buckley, Carter 1999). Therefore, a multinational firm will invest in a certain location, if the location-specific resources lead to competitive advantages compared to investments in another location.

Insert figure 1

According to Porter & Sölvell (1998), primarily specific human capital and knowledge resources generate long-term competitive advantage. In addition, the location-specific advantage also depends on physical and infrastructure resources (Porter 1990; 2003). The degree of the location-specificity considerably varies between the different forms of resources. The higher the degree of location-specificity, the larger are the location-based competitive advantage of the firm, because a change of location would result in a loss of location-specific rents (Enright 1998). The location policy is only relevant for the headquarter decision of the MNC, if it is able to influence the availability of location-specific resources and competencies. The more easily it can influence the location-specific resources, the more likely a location policy may contribute to the know-how upgrading. Location policy can be initiated by the local government and other institutions (e.g. chambers, trade associations) to increase the availability of resources, for instance by education, research, technology, transportation, labour market and integration measures. In figure 2 we show that the effectiveness of a resource-based location policy is positively related with the degree of location specificity of resources and the possibility to influence the resource availability through location policy measures. The higher the degree of location-specificity of resources, the greater is the location-bound competitive advantage, and, in addition, the more easily the availability of location-specific resources can be influenced by the location policy, the more

effective is the location policy. Location-specific resources that can be influenced by policy measures are for instance qualified human capital, specific R&D- and management know-how, institutional infrastructure and cultural resources, and location-specific resources with no or a low possibility to influence their availability by policy measures are for instance natural resources, geographic situation, historical ties and cultural characteristics. The latter determine the local competitive advantage not only by directly influencing the headquarter decisions but also by stimulating the development of other location-specific resources; for instance multiculturalism is the basis for the development of language and cultural skills of the people.

Insert figure 2

### **3.2 Resource Dynamics and Competitive Advantage of a City**

The resources and capabilities of the firm and the determinants of the diamond frequently change in a dynamic international environment. Only those firms that permanently develop new products and processes by upgrading their resources and capabilities will succeed in this dynamic competition (Schumpeter 1912, Prahalad, Hamel 1990). Hence, in order to be able to permanently innovate, the firm must have capabilities to acquire and create new knowledge (i.e. dynamic capabilities (Teece et al. 1997), see '1' in figure 1). Furthermore, in a dynamic view, the firm-specific resources and capabilities influence the development of location-specific resources by know-how upgrading (see '2' in figure 1) that triggers further interaction effects in the diamond model. Hence the 'stickiness' of a location increases (Markusen 1996). A resource-based location policy can positively or negatively influence the competitive

advantage of a city by changing the location specific resources that are complementary to the competencies of the MNC (see '3' in figure 1).

To summarize, the resource-based view of competitive advantage of a city can be stated by the following propositions:

- (I) A city can realize a sustainable competitive advantage, if it offers location-specific resources that are complementary to the firm-specific resources and capabilities of the MNC.
- (II) Location policy is effective, if it positively influences the development and upgrading of location-specific resources.

#### **4 Headquarter-Advantages of Vienna in Central Europe: Empirical Results**

We investigate the competitive advantages of Vienna as headquarter location for MNCs in Central Europe. In particular, we examine the headquarter advantages/disadvantages of Vienna (as CEE/SEE-headquarter location) compared to the second best headquarter location in Central Europe. The city is a headquarter location as regional home-base of the MNCs that coordinate the business activities in the CEE/SEE (Central, East and South East European countries) from the headquarters in Vienna. In 2001 and 2002 we sent out questionnaires to 134 CEE/SEE-headquarters in Vienna and received 51 questionnaires; 7 could not be used due to the lack of data.

## **4.1 Characteristics of the MNCs**

Before examining the headquarter advantages we present some characteristics of the MNCs in Vienna.

### **4.1.1 Industry, Size of the Firm and CEE/SEE-Markets**

Most of the companies are in the chemical, pharmaceutical, cosmetic, banking, insurance and service industry, and almost 60 percent of the firms have more than 100 employees in the CEE/SEE-headquarters in Vienna (see table 1). The CEE/SEE-headquarters coordinate the following markets from Vienna. Most of the companies are present in the Czech Republic (43 %), Hungary (43 %), Slovic Republic (41 %) and Slovenia (34 %) as direct neighbours and almost one third of the companies are generally active in the CEE-countries (see table 1).

Insert Table 1

### **4.1.2 Competencies of CEE/SEE- Headquarters in Vienna**

Which decisions are made by the regional headquarters in Vienna? This question is very important because it shows the strategic role of the CEE/SEE-headquarters in the MNCs. The more strategic decision making competencies are transferred to the headquarters, the stronger is the headquarters' influence on local investment decisions. The data in table 2 indicate that CEE/SEE-headquarters in Vienna have an important strategic role, because more than 40 % of all decisions refer to strategic, controlling and organization decisions.

Insert Table 2

## **4.2 Location-Specific Resources and Headquarter Advantages**

Following our resource-based approach developed in section three we examine the following hypothesis: Vienna can realize a competitive advantage compared to the second best CEE/SEE-headquarter location, if it offers location-specific resources and capabilities. Since we do not have data on firm-specific resources and capabilities of the MNCs, we cannot examine complementarity between firm-specific and location-specific resources.

### **4.2.1 Measurement of Headquarter Advantages**

We measure the headquarter advantages as follows:

- a. Based on Porter's model (1990), we differentiate between the following location factors (see appendix 1): Physical resources, human resources, knowledge resources, and cultural political and social resources.
- b. Evaluation of the strategic relevance of the location factors for the MNC. We asked the following question: How important are the location factors for the realization of long-term competitive advantages of the MNC? (1 – not important; 5 – very important).
- c. Determination of local advantages and disadvantages: We asked the following question: To which extent do the location factors - listed in appendix 1 - lead to advantages/disadvantages of Vienna as CEE/SEE-headquarter location compared to the second best headquarter location in

Central Europe? (disadvantage: - 3 to -1; advantages: +1 to +3; no advantage/no disadvantage: 0).

- d. The overall evaluation of strategic headquarter advantages/disadvantages is carried out by multiplying the location advantages/disadvantages with the strategic relevance factor.

#### **4.2.2 Headquarter Advantages of Vienna as CEE/SEE-Headquarter Location**

Before we analyse the headquarter advantages/disadvantages of Vienna, we have to evaluate the strategic relevance of the location factors for the MNCs.

##### (1) Evaluation of the strategic relevance of the location factors

The strategic relevance of the location factors (S'), which vary between 1 and 5, are presented in table 3. The most important location factors are high qualified human capital, knowledge of foreign languages, political stability, connection to the international airport, management know-how, traffic connections to CEE and SEE and geographic distance to CEE and SEE. In particular, the transport infrastructure, the human capital and knowledge resources (such as know-how in banking and information technology, knowledge of East European languages, quality of education system), and the institutional factors (such as regulation of labour market and foreigners, work permits, efficiency and flexibility of public administration) have a high strategic relevance.

Insert table 3

## (2) Headquarter advantages/disadvantages

The strategic headquarter advantages/disadvantages from the point of view of the MNC are determined by multiplying the location advantages/disadvantages (L) with the strategic relevance factor (S):  $HQ = L * S$  (see appendix 2). For this purpose the strategic relevance factors (S') in table 3 are recoded ( $S = S'/5$ ). We differentiate between physical, human capital, knowledge and cultural, political and social resources (see table 4). The most important headquarter advantages regarding physical resources are the availability of the international airport, transport infrastructure and the geographic distance between Vienna and the CEE and SEE countries, and the largest human resources advantages refer to high-qualified human capital. On the other hand, labour costs and low flexibility of working hours are important headquarter disadvantages. Regarding knowledge resources, the competencies of banks and insurance companies, the management know-how as well as the quality of education system are important headquarter advantages. On the other hand, Vienna has deficits in R&D-know-how and foreign language skills. The largest headquarter advantages regarding cultural, political and social resources refer to the political infrastructure, quality of life, historical ties to CEE/SEE and cultural resources. On the other hand, important headquarter disadvantages result from institutional barriers regarding the restrictive regulation of labour market and for foreigners as well as the low efficiency of public administration.

Insert table 4

### **4.2.3 Location Specificity of Resources and Competitive Advantage of Vienna**

Which of the resources are location-specific and thus may generate high competitive advantages for Vienna as headquarter location? According to our resource-based view of competitive advantage of cities, the following factors show a relatively high degree of location specificity (see figure 2): Geographic distance, transport infrastructure (railways, airport), specific human capital, management know-how, historical ties, multicultural environment, quality of life and cultural resources. As argued above, Vienna's headquarter advantages primarily result from these factors. On the other, there are some important deficits concerning knowledge of foreign languages (especially languages of CEE/SEE-countries), R&D- and IT- know-how.

On the other hand, the institutional barriers, such as restrictive regulation of the labour market and for foreigners (permits of residence and work), low efficiency and flexibility of public administration, are important location-specific headquarter disadvantages, because they negatively influence the headquarter decisions. In addition, the restrictive regulations for foreigners may have an additional negative impact on the multicultural environment and consequently on language and cultural skills.

In addition, we have to consider important interaction effects between the location-specific resources. A first indication shows the correlation coefficient (without controlling for other interaction effects): (a) The correlation coefficients between the quality of education systems (middle and high school; universities) and the high-qualified human capital are positive and significant (0.308 and 0,372). Hence know-how upgrading requires investments in the quality of education systems. (b) Furthermore, the correlation coefficient between multiculturalism and knowledge of foreign languages is also positive

and significant (0,548). Thus a multicultural social environment of the city increases the headquarter advantages due to better language skills.

### **4.3 Discussion and Implications**

What are the competitive advantages of cities in a dynamic international environment? The paper develops a resource-based approach by integrating Porter's diamond model with the resource-based view of the firm. A city may realize sustainable competitive advantages if it offers location-specific resources that are complementary to firm-specific resources of the multinational firm. Our study presents some evidence for Vienna as CEE/SEE-headquarter location for multinational firms in Central Europe. Vienna's headquarter advantages are primarily due to the existence of location-specific resources, such as geographic proximity to CEE and SEE, specific human capital, management know-how in banking and insurance, historical ties, multicultural environment, quality of life and cultural resources. On the other hand, Vienna's most important headquarter disadvantages result from location-specific institutional barriers and also from deficits in R&D- and IT-know how as well as knowledge of foreign languages (especially languages of CEE/SEE-countries). A resource-based location policy has to reduce these institutional barriers because they directly influence the headquarter decisions and also via interaction effects between institutional factors and other location-specific resources. In addition, the location policy has to stimulate investments in the education and research facilities.

There are several limitations of this study and also important research implications: First, the empirical evaluation of headquarter advantages requires additional information on the firm-specific resources and capabilities of the multinational firms in order to be able to evaluate the relationship (complementarity) between firm-specific and location specific

resources. Secondly, the selection of the relevant location factors should be based not only on Porter's model but also on other approaches. Thirdly, the measurement of headquarter advantages must be improved by using additional indicators to increase the validity. Finally, the generalizability of our results should be increased by additional empirical studies on headquarter advantages of cities.

The main management implication of this study refers to the location policy to improve the competitive advantage of a city. A resource-based location policy has the goal to increase the headquarter advantages by stimulating investments in location-specific resources and competencies. As Markusen (1996) says, the goal of the location policy must be to increase the 'stickyness' of a location.

## Literature

- Amit, R., P. Schoemaker (1993), Strategic Assets and Organizational Rent, *Strategic Management Journal*, 14, 33 – 46.
- Andersson, A. E. (1985), Creativity and Regional Development, *Papers of the Regional Science Association*, 56, 5 – 20.
- Armstrong, J. S., T. S. Overton (1977), Estimating Nonresponse-Bias in Mail Surveys, *Journal of Marketing Research*, 14, 396 – 402.
- Barney, J. B. (1986), Strategic Factor Markets: Expectations, Luck and Business Strategy, *Management Science*, 32, 1232 – 41.
- Barney, J. B. (1991), Firm Resources and Sustained Competitive Advantage, *Journal of Management*, 17, 99 – 120.
- Berry, C. R., E. L. Glaeser (2005), The Divergence of Human Capital Levels Across Cities, *Harvard Institute of Economic Research, Discussion Paper, No. 2091*.
- Blakely, E. J. (2001), Competitive Advantage for the 21<sup>st</sup>-century City, *Journal of American Planning Association*, 67, 133- 141.
- Buckley, P. J., M. J. Carter (1999), Managing Cross-border Complementary Knowledge, *International Studies of Management & Organization*, 29, 80 – 104.
- Collis, D. (1991), A Resource-Based Analysis of Global Competition: The Case of the Bearings Industry, *Strategic Management Journal*, 12, 49 – 68.
- Dugan, S. (2000), Sticky Locations, *Locum Destination Review*, 2/2000, 39 – 40.
- Dunning, John H. (1993), Internationalizing Porter's Diamond, *Management International Review*, 33, Special Issue, 7-15.
- Dunning, J. H. (1998), Location and the Multinational Enterprise, *Journal of International Business Studies*, 29, 45 – 66.
- Enright, Michael J. (1998), Regional Clusters and Firm Strategy, in: Chandler Jr., A. D., Hagström, P., Sölvell, Ö. (eds.), *The Dynamic Firm*, Oxford University Press, Oxford, 315-339.
- Eriksen, B., J. Mikkelsen (1996), Competitive Advantage and the Concept of Core Competence: in Foss, N. J., Knudsen C. (eds.), *Towards a Competence Theory of the Firm*, London.
- Enright, M. J., R. Weder (1995), *Studies in Swiss Competitive Advantage*, Bern.
- Fahy, J. (2002), A Resource-based Analysis of Sustainable Competitive Advantage in a Global Environment, *International Business Review*, 11, 57 – 78.
- Feldman, M. P., J. Francis (2002), *Entrepreneurs and the Formation of Industrial Clusters*, Working Paper, John Hopkins University.
- Florida, R. (1996), Regional Creative Destruction: Production Organization, Globalization, and the Economic Transformation of the Midwest, *Economic Geography*, 72, 314 – 334.
- Florida, R. (2002), *The Rise of the Creative Class*, New York.
- Florida, R. (2005), *Cities and the Creative Class*, New York.
- Foss, N. J. (1996), Higher-Order Industrial Capabilities and Competitive Advantage, *Journal of Industry Studies*, 3, 1- 20.
- Foss, N. J., C. Knudsen (eds.) (1996), *Towards a Competence Theory of the Firm*, London.
- Fujita, M., J.-F. Thisse (2000), The Formation of Economic Agglomerations: Old Problems and New Perspectives, in: Huriot J.-M., J.-F. Thisse (eds.), *Economics of Cities*, Cambridge, 3 – 73.
- Gakenheimer, R. (2000), The Future of Transport, Mobility and Infrastructure, in: R. Simmonds, G. Hack (eds.), *Global City Regions*, 229 – 235.
- Glaeser, E. L. (1999), Learning in Cities, *Journal of Urban Economics*, 46, 254 – 277.
- Glaeser, E., J. E. Kohlhase (2003), *Cities, Regions and the Decline of Transport Costs*, NBER Working Paper, No. 9886.
- Glaeser, E. L., A. Saiz (2003), *The Rise of the Skilled City*, NBER Working Paper, No. 10101.
- Grant, R. (1991a), The Resource-based Theory of Competitive Advantage: Implication for Strategy Formulation, *California Management Review*, Spring, 114 – 135.
- Grant, R. M. (1991b), Porter's Competitive Advantages of Nations: An Assessment, *Strategic Management Journal*, 12, 535 – 548.
- Kotler, P., D. Haider, I. Rein (1993), There's no Place Like Our Place! The Marketing of Cities, Regions and Nations, *The Futurist*, 27/6, 14 – 18.

- Lawson, C. (1999), Towards a Competence Theory of Region, *Cambridge Journal of Economics*, 23, 151 – 166.
- Lawson, C., E. Lorenz (1999), Collective Learning, Tacit Knowledge and Regional Innovative Capacity, *Regional Studies*, 33, 305 – 317.
- Makadok, R. (2001), Toward a Synthesis of the Resource-based and Dynamic-Capabilities View of Rents, *Strategic Management Journal*, 22, 387 – 401.
- Malmberg, A., O. Sölvell, I. Zander (1996), Spatial Clustering, Local Accumulation of Knowledge and Firm Competitiveness, *Geografiska Annaler*, 78B, 85 – 97.
- Malecki, E. J. (1999), Knowledge and Regional Competitiveness, Paper presented at the 'Knowledge, Education and Space'-Conference, University of Heidelberg.
- Markusen, A. (1996), Sticky Plances in Slippery Space: A Topology of Industrial Districts, *Economic Geography*, 72, 293 – 313.
- Maskell, P., A. Malmberg (1999), Localised Learning and Industrial Competitiveness, *Cambridge Journal of Economics*, 23, 167 – 185.
- O'Donnell, S., T. Blumentritt (1999), The Contribution of Foreign Subsidiaries to Host Country National Competitiveness, *Journal of International Management*, 5, 187 – 206.
- Peck, J. (2005), Struggling with the Creative Class, *International Journal of Urban and Regional Research*, 29, 740 – 740.
- Peteraf, M. (1993), The Cornerstones of Competitive Advantage: A Resource-based View, *Strategic Management Journal*, 14, 179 – 191.
- Peteraf, M. A., J. B. Barney (2003), Unravelling the Resource-Based Tangle, *Managerial and Decision Economics*, 24, 309 – 323.
- Porter, M. (1990), *The Competitive Advantages of Nations*, London.
- Porter, M. (1998a), *On Competition*, Cambridge.
- Porter, M. (1998b), Clusters and the New Economics of Competition, *Harvard Business Review*, November.
- Porter, M. (1998c), Porter's Microscope, *Worldlink*, July/August, 1998.
- Porter, M. (2000), The Current Competitiveness Index: Measuring the Microeconomic Foundations of Prosperity Competitiveness, in: *The Global Competitiveness Report 2000*, World Economic Forum, New York.
- Porter, M. (2003), Building the Microeconomic Foundations of Prosperity: Findings from the Microeconomic Competitiveness Index, in: *Global Competitiveness Report 2002 – 2003*, World Economic Forum, New York.
- Porter, M., Ö. Sölvell, I. Zander (1993), *Advantage Sweden*, Stockholm.
- Porter, M., Ö. Sölvell (1998), The Role of Geography in the Process of Innovation and the Sustainable Competitive Advantage of Firms, in: Chandler Jr., A. D., Hagström, P., Sölvell, Ö. (eds.), *The Dynamic Firm*, Oxford University Press, Oxford.
- Porter, M., H. Takeuchi, M. Sakakibara (1999), *Two Japans: Competitive Advantage and Disadvantage of Japanese Economy*.
- Porter, M., H. Takeuchi, M. Sakakibara (2000), *Can Japan Compete?* London.
- Prahalad, C., G. Hamel (1990), The Core Competence of the Corporation, *Harvard Business Review*, 68, 79 – 91.
- Rugman, A. M. und Verbeke (1992), Alain, Multinational Enterprise and National Economic Policy, in: Buckley, Peter J. (eds.), *Multinational Enterprises in the World Economy*, Elgar, Aldershot, 194-211.
- Rugman, A. M. und Verbeke, Alain (1993), Foreign Subsidiaries and Multinational Strategic Management: An Extension and Correction of Porter's Single Diamond Framework, *Management International Review*, 33, Special Issue, 71-83.
- Rugman, A. M., A. Verbeke (1998), Multinational Enterprises and Public Policy, *Journal of International Business Studies*, 29, 115 – 136.
- Rugman, A. M., A. Verbeke (2003), Extending the Theory of the Multinational Enterprise: Internationalization and Strategic Management Perspectives, *Journal of International Business Studies*, 34, 125- 137.
- Rumelt, R. P. (1987), Theory, Strategy, and Entrepreneurship, in D. Teece (ed.), *The Competitive Challenge*, Cambridge, 137 – 158.

- Sassen, S. (2000), *Cities in the Global Economy*, in R. Simmonds, G. Hack (eds.) *Global City Regions*, New York, 269 - 276.
- Schumpeter, J. (1912), *Theorie der wirtschaftlichen Entwicklung*, Berlin.
- Scott, A. J. (2000), *Regions and the World Economy*, Oxford.
- Spender, J. C. (1998), *The Geographies of Strategic Competence*, In: Chandler Jr., A. D., Hagström, P., Sölvell, Ö. (eds.), *The Dynamic Firm*, Oxford University Press, Oxford, 417 – 439..
- Sölvell, Örjan (1998), *The Role of Geography in the Process of Innovation and the Sustainable Competitive Advantage of Firms*, in: Chandler Jr., A. D., Hagström, P. und Sölvell, Ö. (eds.), *The Dynamic Firm*, Oxford University Press, Oxford, 441-457.
- Sölvell, Ö., I. Zander, M. E. Porter (1991), *Advantage Sweden*, Göteborg.
- Steinbock, D. (1998), *The Competitive Advantage of Finland*, Helsinki.
- Teece, D. J. , G. Pisano, A. Shuen (1997), *Dynamic Capabilities and Strategic Management*, *Strategic Management Journal*, 18, 509 – 533.
- Wernerfelt, B. (1984), *A Resource-Based View of the Firm*, *Strategic Management Journal*, 5, 171 – 180.
- Winter, S. (1995), *Four Rs of Profitability: Rents, Resources, Routines, and Replication*, in: C. A. Montgomery (ed.), *Resource-based and Evolutionary Theories of the Firm*, Boston, 147 – 158.

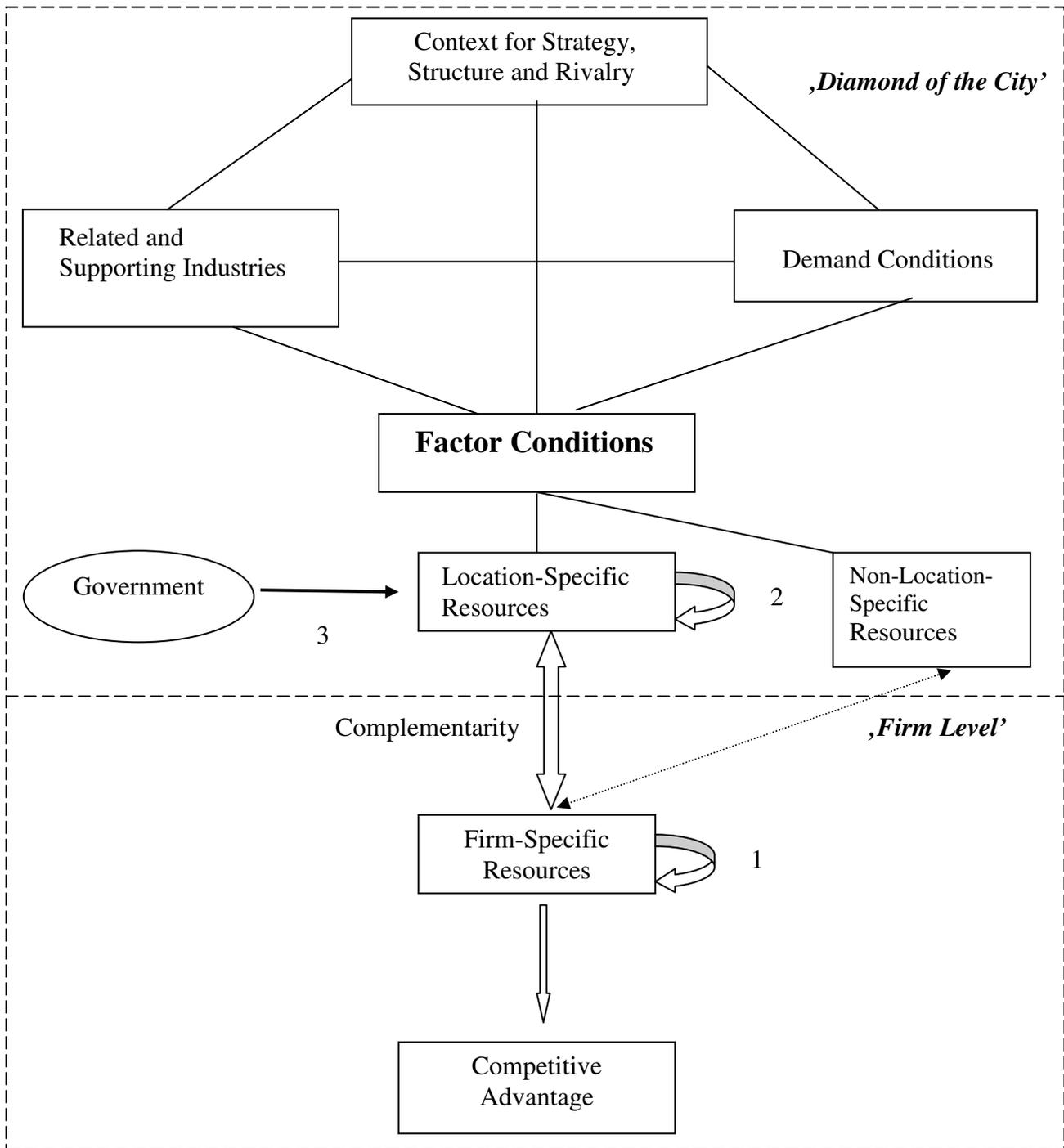


Figure 1: A Resource-based Approach of Competitive Advantage of Cities

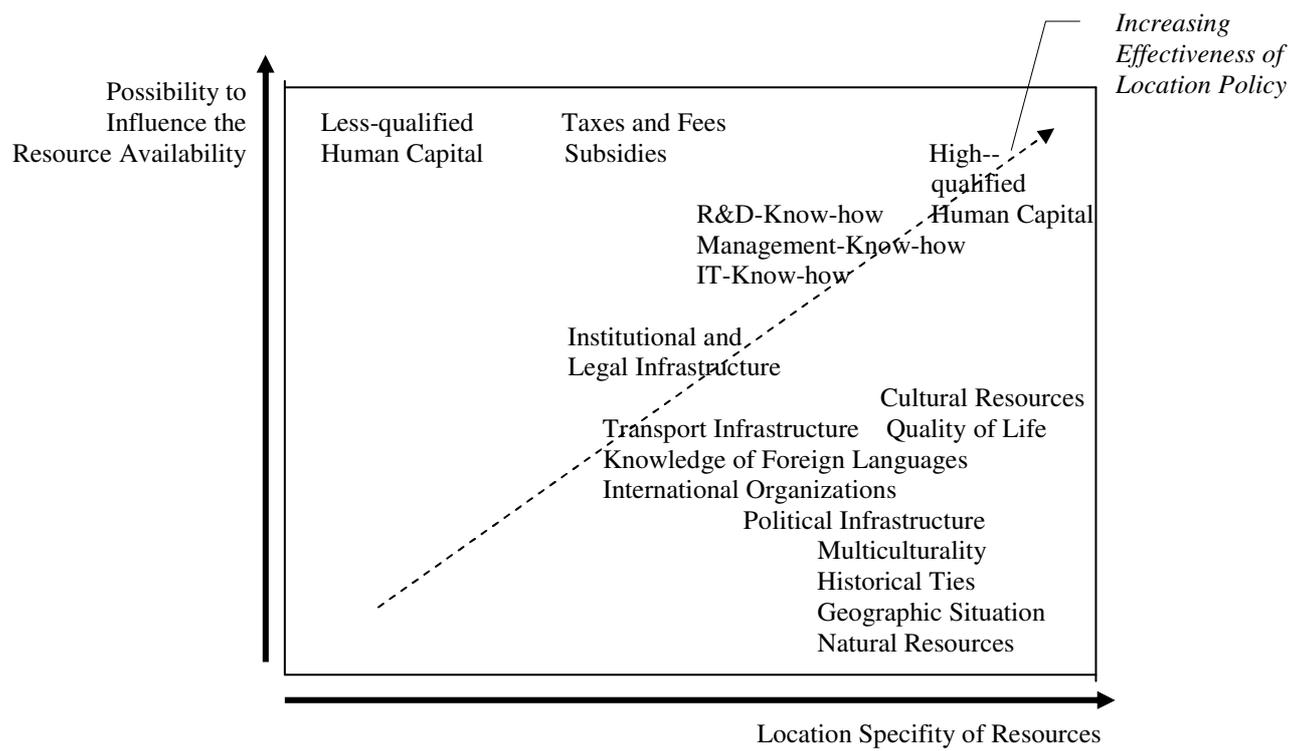


Figure 2: Location Specificity and Possibility to Influence the Resource Availability Through Location Policy

<b>Industry</b>	<b>Percentage</b>
Chemical/Pharmaceutical/Cosmetic Industry	29
Banking/Insurance/Services	16
Supplies	12
Machine Industry	9
Food Industry	7
Steel and Metal Processing Industry	7
Construction Industry	5
Appliances/Electronic Entertainment	5
Agricultural Products	2.5
Energy Industry	2.5
Tobacco Industry	2.5
IT-Industry	2.5
<b>Size of the Firm</b>	
< 10 Employees	5
10 - 100 Employees	35
> 100 Employees	59
no data	1
<b>CEE/SEE Markets</b>	
Czech Republic	43
Hungary	43
Slovic Republic	41
Slovenia	34
CEE (general)	32
Romania	32
Croatia	30
Poland	25
Bulgaria	20
Serbia and Montenegro	16
GUS-States	14
Bosnia and Herzegovina	9
Macedonia	9
Baltic States	7
Albania	7

Table 1: Characteristics of the Companies:  
Industry, Company Size and Markets of the CEE/SEE-Headquarters

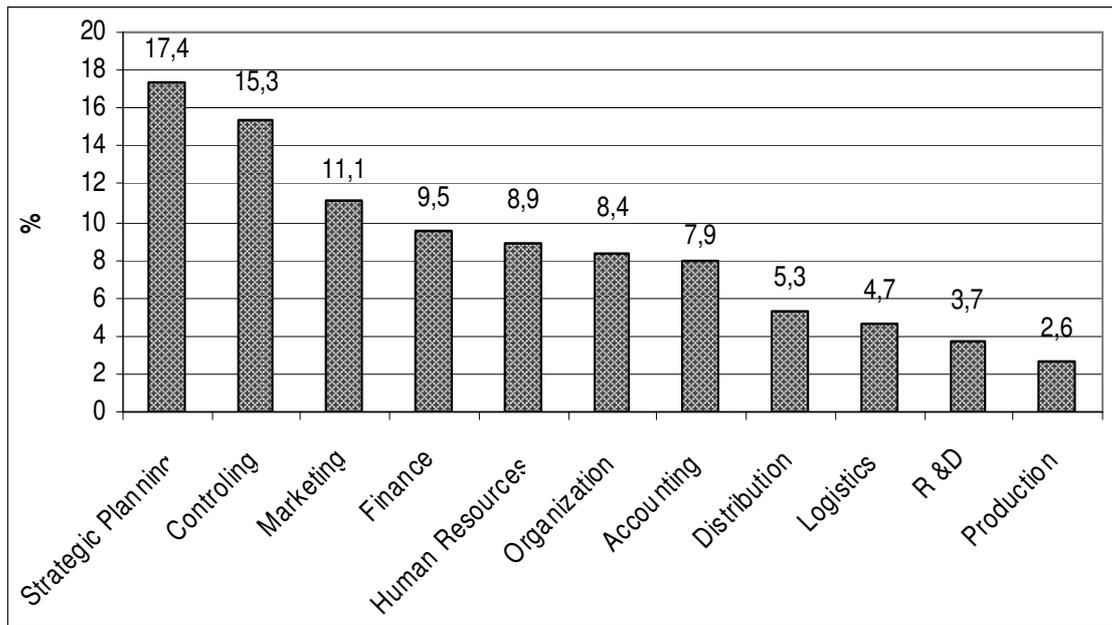


Table 2: Competencies of CEE/SEE-Headquarters in Vienna

### Strategic Relevance (S')\*

High-qualified Human Capital	4.55
Knowledge of Foreign Languages	4.10
Political Stability	4.10
Connection to the International Airport	3.95
Availability of Management-Know-how	3.90
Transport Connection to CEE/SEE**	3.80
Geographic Distance to CEE/SEE	3.75
Competences of Banks (CEE/SEE)	3.70
Flexibility of Public Administration	3.60
Labour Costs	3.55
Availability of IT-Know-how	3.55
Efficiency of Public Administration	3.55
Knowledge of East European Languages	3.45
Low Taxes, Fees	3.45
Low Strike Frequency	3.45
Quality of Education (Universities)	3.40
Restrictive Regulations for Permits of Residence for Foreigners	3.40
Work Permits for Foreigners	3.40
Availability of Logistic Resources	3.30
Quality of Logistic Resources	3.30
Degree of Liberalization of the Labour Market	3.25
Quality of Education (Middle and High Schools)	3.15
Quality of Life	3.15
Flexibility of Working Hours	3.15
Historical Ties to CEE/SEE	3.05
Costs of Office Space	3.00
Quality of Office Space	2.80
Availability of Office Space	2.75
Cost of Living	2.75
Subsidies	2.65
Competencies of the Insurance Companies (CEE/SEE)	2.65
Availability of R&D-Know-how	2.60
Cultural Resources/Events	2.60
Multiculturalism of Labour Force	2.45
Availability of Public Transportation Systems	2.45
Multiculturalism of the City	2.45
Existence of International Organizations	2.20
Less-qualified Human Capital	1.55

\*S' varies between 1 (no strategic relevance) and 5 (very high strategic relevance).

\*\* (CEE/SEE): Central, East, South East European countries

Table 3: Strategic Relevance of Location Factors

**Headquarter Advantages/**

<b>Physical Resources</b>	<b>Disadvantages</b>
Geographic Distance to CEE/SEE	1.37
Costs of Office Space	0.46
Quality of Office Space	0.95
Availability of Office Space	0.90
Availability of Public Transportation Systems	0.79
Availability of Logistic Resources	0.78
Quality of Logistic Resources	0.90
Connection to the International Airport	1.86
Transport Connection to CEE/SEE	1.48

**Human Resources**

High-qualified Human Capital	1.11
Labour Costs	-0.81
Flexibility of Working Hours	-0.30
Multiculturalism of the Labour Force	0.22
Less-qualified Human Capital	0.01

**Knowledge Resources**

Knowledge of Foreign Languages	0.57
Knowledge of East European Languages	0.28
Competencies of Banks (CEE/SEE)	1.41
Availability of IT-Know-how	0.54
Competencies of Insurance Companies (CEE/SEE)	0.87
Quality of Education (Universities)	0.95
Quality of Education (Middle and High Schools)	1.04
Availability of Management Know-how	0.99
Availability of R&D Know-how	0.38

**Cultural, Political and Social Resources**

Political Stability	1.99
Low Strike Frequency	1.86
Quality of Life	1.38
Historical Ties to CEE/SEE	1.29
Cultural Resources/Events	1.11
Existence of International Organizations	0.63
Multiculturalism of the City	0.53
Cost of Living	0.24
Public Subsidies	-0.20
Efficiency of Public Administration	-0.35
Flexibility of Public Administration	-0.22
Degree of Liberalization of the Labour Market	-0.52
Low Taxes and Fees	-0.64
Permits of Residence for Foreigners	-0.73
Work Permits for Foreigners	-0.73

Table 4: Headquarter Advantages/Disadvantages

## Appendix 1: Location Factors

### Physical Resources

Geographic Distance to CEE/SEE*
Costs of Office Space
Quality of Office Space
Availability of Office Space
Availability of Public Transportation Systems
Availability of Logistic Resources
Quality of Logistic Resources
Connection to the International Airport
Transport Connection to CEE/SEE

### Human Resources

High-qualified Human Capital
Labour Costs
Flexibility of Working Hours
Multiculturalism of the Labour Force
Less-qualified Human Capital

### Knowledge Resources

Knowledge of Foreign Languages
Knowledge of East European Languages
Competencies of Banks (CEE/SEE)
Availability of IT-Know-how
Competencies of Insurance Companies (CEE/SEE)
Quality of Education (Universities)
Quality of Education (Middle and High Schools)
Availability of Management Know-how
Availability of R&D Know-how

### Cultural, Political and Social Resources

Political Stability
Low Strike Frequency
Quality of Life
Historical Ties to CEE/SEE
Cultural Resources/Events
Existence of International Organizations
Multiculturalism of the City
Cost of Living
Public Subsidies
Efficiency of Public Administration
Flexibility of Public Administration
Degree of Liberalization of the Labour Market
Low Taxes and Fees
Permits of Residence for Foreigners
Work Permits for Foreigners

\*CEE/SEE refers to Central, East, South East European countries

## Appendix 2: Strategic Headquarter Advantages/Disadvantages

	Headquarter-Advantages/ Disadvantages (HQ)*
Political Stability	1.99
Connection to the International Airport	1.86
Low Strike Frequency	1.78
Transport Connection to CEE/SEE**	1.48
Competencies of Banks (CEE/SEE)	1.41
Quality of Life	1.38
Geografic Distance to CEE/SEE	1.37
Historical Ties to CEE/SEE	1.29
High-qualified Human Capital	1.11
Cultural Resources/Events	1.11
Quality of Education (Middle and High School)	1.04
Availability of Management-Know-how	0.99
Quality of Office Space	0.95
Quality of Education (Universities)	0.95
Availability of Office Space	0.90
Quality of Logistic Resources	0.90
Competencies of Insurance Companies (CEE/SEE)	0.87
Availability of Public Transportation Systems	0.79
Availability of Logistic Resource	0.78
Existence of International Organizations	0.63
Knowledge of Foreign Languages	0.57
Availability of IT-Know-how	0.54
Multiculturalism of the City	0.53
Costs of Office Space	0.46
Availability of R&D-Know-how	0.38
Knowledge of East European Languages	0.28
Cost of Living	0.24
Multiculturalism of Labour Force	0.22
Less-qualified Human Capital	0.01
Subsidies	-0.20
Flexibility of Public Administration	-0.22
Flexibilität of Working Hours	-0.30
Efficiency of Public Administration	-0.35
Degree of Liberalization of the Labour Market	-0.52
Low Taxes and Fees	-0.64
Restrictive Regulation for Permits of Residence for Foreigners	-0.73
Work Permits for Foreigners	-0.73
Labour Costs	-0.81

\* HQ (Strategic Headquarter Advantages/Disadvantages) =  
L (Location Advantages/Disadvantages)\*S (Strategic Relevance Factor)

\*\* CEE/SEE refers to Central, East, South East European countries