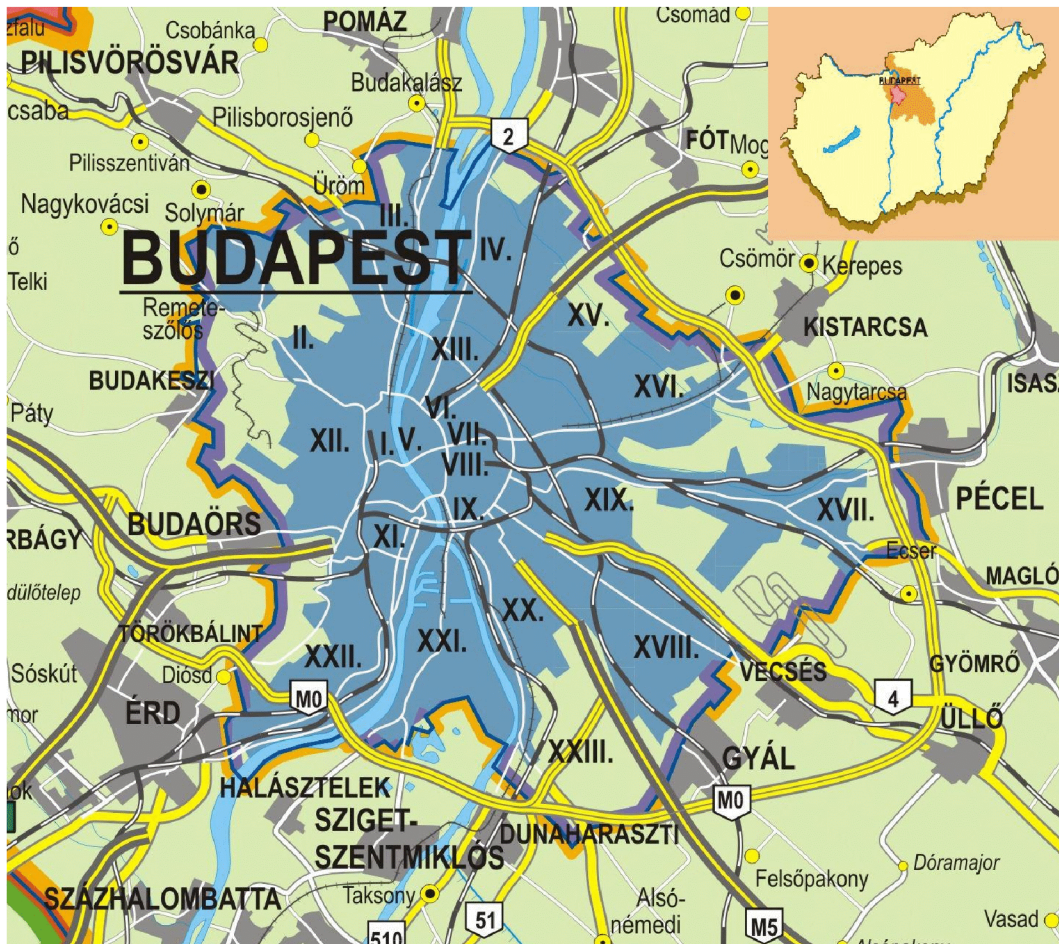


Master thesis

# Foreign office-based firm location dynamics in Budapest



Jelmer Dekker  
August 2011



rijksuniversiteit  
 groningen

faculteit ruimtelijke  
 wetenschappen



# Colofon

**Title:** Foreign office-based firm location dynamics in Budapest

Jelmer Dekker  
Budapest  
ELTE Institute of Geography and Earth Sciences  
University of Groningen, Faculty of Spatial Sciences  
August, 2011  
Student number: 1396706  
jelmerdekker@hotmail.com  
Supervisor: P. Van Steen

## Preface

Since the beginning of the bachelor program of Human Geography, my attention was gripped by the phenomenon of migration. Both in the human way and as I later discovered, on the level of the firm. In the master of Economic Geography a strong theoretical basis behind all the firm movements was presented, which made it possible to better understand the complicated process behind firm relocation.

As in the Netherlands the research on firm level is on such a high level and most interesting topics have been studied over and over, I focussed my view on another country. In the last decades, lots of firms moved part of, and sometimes their entire business, elsewhere. A strong focus on the Eastern European countries, which after the fall of the Berlin wall and the Soviet Union began to open up towards the West, is clearly noticeable.

One of these Eastern European countries is Hungary, a country which was the first to replace the socialistic system with more market oriented policies. As a result of this, major flows of Foreign Direct Investment flooded into the country, a process which changed Hungary's economy and society till upon this day.

As part of the courses in the Master of Economic Geography are optional, I was able to apply for courses in Budapest, Hungary. Here, I attended courses in the 2010 spring semester of the ELTE Institute of Geography and Earth Sciences. Also, I had the opportunity to do research for this thesis, which led to a 4 month studying period abroad.

This resulted in the Master thesis lying before you. A thesis, which couldn't have been completed without support from a variety of persons and institutions.

Therefore, I would like to thank the professors at the ELTE, who provided a warm welcome and very interesting views on various geographical phenomena. Among them, Gábor Szalkai and Márton Czirfusz deserve to be mentioned, as they helped me out in getting a clearer picture of the Budapest market and found the time to give an interview.

I would also like to thank the other interviewees, for their time, answers and valuable insights in current and future market development in Budapest. Although the office market developments had been slowed down due to the 2008 global financial crisis, time still proved to be a valuable good. Special thanks go out to Ms Endrődy (ITDH) and Mr Borbély (CBRE) for providing additional literature. Financially, the Erasmus fund and the Groninger University fund deserve to be mentioned.

Special thanks go out to my supervisor and Erasmus coordinator Mr. P. Van Steen, for his supporting comments and guidance. And, last but not least, to my parents, family and friends for their continued interest, but mostly for their unconditional support.

Groningen, August 2011

Jelmer Dekker

P.S. on May 12<sup>th</sup> 2011 the names of 26 Budapest squares and streets were officially changed, also the airport and the ITD Hungary were renamed. This reflects names mentioned in this thesis. I will use the old names, as literature, reports and maps still use these names. For future notice, most important changes are listed below.

Moszkva tér → now called Széll Kálmán tér

Roosevelt tér → now called Széchenyi tér.

Ferihegy International Airport → Budapest Ferenc Liszt International Airport

ITD Hungary stopped in 2010, since 2011: Hungarian Investment and Trade Agency (HITA)

## Summary

In this thesis, the location and the dynamics of foreign office-based firms in Budapest are researched. The service sector, as biggest user of the offices, has seen a significant growth in Budapest, thereby heavily impacting the office market developments of Hungary's capital city.

After the collapse of Communism in Hungary in 1989, Hungary quickly transformed into a market economy, thereby opening up its market towards the West and allowing foreign firms and their Foreign Direct Investments (FDIs) to enter the Hungarian market. The market access and costs factors were the drivers of these investments, while the policy of the government of that time, privatization of its property, triggered them. By the end of the 1990s, Hungary's economy was foreign controlled, as over 80% of the exports were under foreign control. FDIs have helped Hungary modernize industries, create jobs and develop economic growth.

In this thesis the Millennium separates two periods of FDI. Pre-2000, the industrial sector investments dominated the Hungarian economy, as foreign investors were attracted by the geographical location, the labour costs and productivity of a skilled and qualified labour force, production costs, privatization policy, incentives, political and economic stability, infrastructure, liberal trade and investment climate and the tax and legal system.

After the Millennium, the tertiarisation of the economy resulted in the service sector becoming of most importance for Hungary, resulting in an increased demand for offices. Most important location factors, diverging from the pre-2000 factors are the cultural proximity, well-educated labour force with foreign language skills, good level of IT-infrastructure, integration of European regulations and business environment, time proximity, office and quality of life factors and previous experiences with the affiliates.

This service FDI was, as agglomeration advantages occur, strongly focussed on Budapest, where it, together with industrial upgrading towards higher value added activities and the growing importance of R&D activities, resulted in an office boom within Budapest. The developers and investors, facilitators of the office space to foreign firms, as they tend to lease office space, speculatively developed great amounts of offices, thereby hardly having to deal with municipality and district regulations. Recently, the crisis caused a standstill in office delivery and a sharp downfall of the demand for office space by the foreign firms.

As foreign firms are the major tenants of the higher quality office segment an analysis of the office developments resulted in location trends of these foreign firms. Furthermore, it is important to emphasize the clustering-type of activity that service firms show, meaning that eventually the whole heterogeneous group of services will relocate to the new office area. These trends show the short time in which a relocation is set up, the need for large office spaces, the increased amount of re-lease deals in the market, the increased use of build-to-suit developments and the development of more 'green' buildings. Most important though, are the correlation of office-based firms and their offices with the public transport and road network, and the move from office-based away from downtown, towards city edges and green locations.

Future developments regarding the office-based firms can also be detected in the provincial cities, as a combination of government policy, mostly based on incentives, and the diseconomies of agglomeration occurring in Budapest, like rising wages, congestion and an increased competition for employees, make office-based firms relocate to these cities. The analysis of the business sector, as the most mobile sector among the services, already shows the existence of this process.



## Table of contents

1) Research introduction.....	7
1.1. Introduction to the research.....	7
1.2. Research goal definition.....	7
1.3. Research question definition.....	8
1.4. Research methodology.....	8
2) Theoretical framework.....	10
2.1. Introduction.....	10
2.2. Classical location theories.....	11
2.3. Neoclassical location theories.....	12
2.4. Behavioural location theories.....	14
2.4.1. <i>Bounded rationality</i> .....	14
2.4.2. <i>Conflicting goals</i> .....	15
2.4.3. <i>Incomplete environmental adaption</i> .....	15
2.5. Institutional location theories.....	15
2.5.1. <i>The Geography of Enterprise</i> .....	15
2.5.2. <i>The more modern institutional location theory</i> .....	17
2.6. The evolutionary approach.....	18
2.7. Comparison, critics and conclusions on location theories.....	19
2.8. Firm migration studies.....	21
2.9. Concluding statements.....	22
3) The movement of foreign firms towards Hungary.....	23
3.1. Introduction.....	23
3.2. Theories and operationalization of internationalization.....	23
3.2.1. <i>Theories on Internationalization</i> .....	23
3.2.2. <i>Operationalizational definitions</i> .....	25
3.3. The development of the Hungarian market.....	29
3.4. FDI in Hungary.....	30
3.4.1. <i>Entry modes</i> .....	32
3.4.2. <i>FDI location in Hungary</i> .....	33
3.4.3. <i>Hungary's foreign firm attracting factors (Pull factors)</i> .....	34
3.4.4. <i>Hungary's foreign firm rejecting factors (Push factors)</i> .....	39
3.5. Concluding statements.....	40
4) The movement of foreign firms towards Budapest.....	41
4.1. Introduction.....	41
4.2. The development of the Budapest market.....	41
4.3. The locational factors of Budapest.....	44
4.4. The focus on the office market.....	45
4.5. Concluding statements.....	46
5) The location of foreign office-based firms in Budapest.....	47
5.1. Introduction.....	47
5.2. Actors involved in the foreign firm establishment process.....	47
5.3. The Office Area map.....	48
5.4. The business service map of Budapest.....	52
5.5. Explaining the Office Hub locations.....	53
5.5.1. <i>Image and quality location factors</i> .....	53
5.5.2. <i>Accessibility factors</i> .....	54
5.5.3. <i>Institutional factors</i> .....	56
5.5.4. <i>The 'hard' agglomeration factors</i> .....	56
5.6. Concluding statements.....	57

6) Factors changing the locational pattern of the near future .....	58
6.1. Introduction .....	58
6.2. Macro-economic developments.....	58
6.3. Micro-economic developments .....	61
6.3.1. <i>Public Transport</i> .....	61
6.3.2. <i>Road infrastructure and congestion</i> .....	62
6.3.3. <i>Trends in office development</i> .....	62
6.3.4. <i>Budapest office market dynamics</i> .....	64
6.3.5. <i>Policy changes</i> .....	65
6.4. High potential sectors.....	65
6.4.1. <i>The automotive sector</i> .....	66
6.4.2. <i>The logistics sector</i> .....	66
6.4.3. <i>The IT sector</i> .....	67
6.4.4. <i>The R&amp;D and Biotech sector</i> .....	67
6.4.5. <i>The electronics sector</i> .....	68
6.4.6. <i>Shared Service Centres &amp; Business Process Outsourcing</i> .....	68
6.5. Concluding statements .....	70
7) The future locational map of foreign office-based firms in Budapest .....	71
7.1. Introduction .....	71
7.2. The Future office area location map .....	72
7.3. Trickle down in Hungary .....	74
8) Conclusion .....	76
9) References.....	77
10) Appendix A: The OLI-Paradigm as in Dunning & Lundan (2008).....	87
Appendix B: Overview of Expert Interviews .....	88
Appendix C: Interview set-up .....	89
Appendix D: SSC+BPO+ITO database.....	92
Appendix E: Public transport accessibility in minutes from respectively Nyugati Station, Soroksári út (Haller Gardens) and Árpád hid (Váci Út).....	93

# 1) Research introduction

## 1.1. Introduction to the research

Since history the Magyar (Hungarians) faced many political, military and cultural challenges, which can be closely related to their central location between large empires. Nowadays, this central location provides many economical advantages, as the increasingly globalising world has penetrated the Hungarian economy.

Hungary's position among Eastern European countries has proven to be ahead of the pack, as main attractor of large inflow of FDI (Foreign Direct Investments). By 2007, global capital and transnational companies invested a total of 66 billion Euros in the Hungarian economy. More than half of the FDI were invested in the metropolitan area of Budapest, of which the construction of commercial, office development has been most evident (Földi and Van Weesep, 2007).

As topography on its own cannot result in such large amount of investment, it is necessary to look into the political, social, cultural and economical context. Here, the liberalisation of the economy after the collapse of the state-socialism during the years 1989/1990 has the most significant role. This resulted in socio-economic changes in Budapest, like the privatisation of housing, the liberalisation of the property market and the upcoming presence of global capital (Kovács, 2009).

For an economic geographer this system change has very interesting consequences, since the spatial pattern of the firms is heavily influenced by all the new investors and actors in the Budapest market. Highly influential are the international firms (TNC's) that have moved into Budapest. They create a dependency of other, mostly local firms, which deliver goods and services for the firm, resulting in an economic improvement in the city and its surrounding.

Implementing theories on the foreign firm dynamics, both on macroeconomic level (Porter, Hakanson, Dunning, Vernon) and microeconomic level (Pred, Meester and Pellenbarg) in Budapest should result in an overview of the current location dynamics of the foreign firms. Office-based firms, their location choices and motivations are researched more thoroughly, as since the year 2000 their numbers have increased significantly. With rapidly changing economic times, the understanding of this foreign firm location process is analysed, resulting in a future locational pattern of the Budapest.

## 1.2. Research goal definition

With the liberalisation of the Hungarian economy, Hungary opened towards the world market. Located centrally in Europe, with the relatively low salaries, the higher education of workers and the availability of good infrastructure and a stable political system, it was a perfect investor's opportunity. Within the increasing globalising world the inflow of investment increased even more. Most of the investments were related to the Budapest area, where 20% of the population lives, but 40% of the country's economic output is created (JLL Hungary, 2009).

A lot of International Business (IB) and Economics research is and will be done to explore the market situation. A view on the research themes shows that most of this research is directed from an economical and business perspective and lacks a (economic) geographical

perspective. Only in recent years there have been more scholars focusing on the geographical aspect of the market, as it proves to be increasingly important in a globalizing world economy.

There is still a need for research on the geographical, locational aspect of the firm. As the location theory demonstrates, a perfect location for a firm to establish is hard to find, especially when the establishment is an international one. The changing economy of the Budapest market, with a laboursectoral division changing rapidly, new types of firms establishing and their new location preferences, provides an excellent research potential.

To gain insight in the market, two research goals are necessary:

The first research goal is to understand why foreign office-based firms have settled in Budapest, and why they have chosen their presently used location.

The second research goal is to explore the likelihood of different location patterns of foreign office-based firms in Budapest in the near future.

### **1.3. Research question definition**

The main question:

Why have foreign office-based firms moved to Budapest and which locational factors determine the location pattern of these foreign office-based firms in Budapest now and in the near future?

Sub questions:

1)

Why have foreign office-based firms moved to Hungary, with a special focus to the city of Budapest?

2)

What are the main sites used by foreign office-based firms in Budapest and what explains this locational pattern?

3)

Which factors are likely to influence this locational pattern in the near future?

4)

What would be the resulting new location map of foreign office-based firms in Budapest?

### **1.4. Research methodology**

A locational map of foreign office-based firms looks to be an easy task, but when dynamics join in, there is need of a historical development of the market and the place in which the firms are (re) locating. Lots of macro-economic factors in both homeland and host countries play a role in the relocation decision of a foreign firm, together with cultural, political and social factors the context in which or when a firm relocates becomes clearer to mind. On the other hand the microeconomic, in this case Budapest, market is influenced by all factors mentioned above, but together with its own history creates an own regional/ local market (environment). This is the scale in which this thesis creates the locational map of the foreign firms, trying to understand their history, in order to create and explain their nowadays location and their future dynamics.

To gain insight into the Budapest market, crucial market information, history and future developments are available by various secondary data sources. These mostly exist of regional

newspapers, reports by real estate consultancy firms, developers, facility managers, reports by and on the local government and the ITD Hungary (a governmental non-profit organization which helps foreign firms finding their way in and around the Budapest area). There is also a growing amount of research being done on the off-, on- or near shoring of (parts of) foreign firms in Middle- and Eastern Europe, which is useful in determining the “why?” and “when?” questions involved in the relocation. Statistical data from various Statistical Agencies (OECD, IMF, MNB (Hungarian National Bank), Eurostat and the Hungarian Central Statistical Office) will also be consulted.

The research approach most applicable to this describing and exploring thesis is more qualitative by nature, as the dynamics and expectations are best known by the actors involved in the locational dynamics in Budapest. Therefore the choice for expert interviews with various actors in the Budapest market was the most optimal choice of gaining information for the (future) location map. The actors involved in the process of firm relocation prove to be: the ITDH, the international firms, the real estate consultancy agents, management and developers and the government. As an additional information source, interviews with lecturers at the Faculty of Science of the Eötvös Loránd University provide an overview on the history of Budapest in its widest context, thereby providing valuable information in the way to approach the study of location patterns in Budapest.

With use of various economic geographical theories on the location of firms the macro and micro economic market will be analysed. Macro-economic factors play the crucial role in why firms move towards Hungary and especially towards Budapest. Micro economic factors provide insight in the narrow location choice problems of foreign office-based firms in Budapest. They are strongly related to the more behaviourally orientated, empirical firm migration studies, where various location factors, on the local (city) scale, have been determined. These factors are useful for analysing locational choice in Budapest.

In this thesis, neoclassical, behavioural and institutional theories will be used to explain firm locations and an attempt is made to discover evolutionary approaches to locational theory. As stated in Pen (2002), the use of various theories together, should result in renewed and better insights.



## 2) Theoretical framework

### 2.1. Introduction

Over time different theories have been trying to explain the relocation reasoning of the firm, a process, closely related to the location theories.

Firm demography is related to the relocation aspects of a firm, while the location theories relate to the context surrounding a firm when leaving behind one location and moving towards another one.

Re-location approaches are generally treated as a special case of location theories, but re-location is a process of two sequential steps, related to the substitution of one location for another. The first is the decision to move, the second the decision to relocate to another site. Firm demography studies these entries and exits of firms, which have consequences for different geographical scales, either at the (inter)national, regional, or local level (Pellenbarg, 1985). Important to mention here, is the interrelatedness between firm, scale and environment, because the interaction between the firm and its regional environment is a crucial determinant of the behaviour of the firm (Van Wissen, 2002).

For a definition of the location theory, Capello (2007) states that “*location theory seeks to explain the distribution of activities in space, the aim being to identify the factors that influence the location of individual activities, the allocation of different portions of territory among different types of production, the dividing of a spatial market among producers, and the functional distribution of activities in space* (Capello, 2007, p. 4)”

In short, location theory explains from different perspectives the location of economic activities and why they appear on that location.

Basically, the location theory focuses on the optimal location choice that is determined by the attractiveness of a site for firm location (pull factors), while relocation theory also takes into account the first step, the push out of the present location (Pellenbarg *et al.*, 2002).

Van Dijk & Pellenbarg (2000) provide a definition of these push, pull and keep factors. Push-factors are reasons to leave the present location, pull-factors are forces that attract a firm to another location and keep-factors are reasons to stay at the present location. They state that “*the interplay of these push-, keep- and pull-factors is very important in the location decision process.*”

Lloyd and Dicken (1977) provide another categorisation of the factors influencing the firm migration decision, other than the previously mentioned subdivision in push, pull and keep factors. According to their model, the migration of firms can be explained by three factors:

- 1) Firm internal factors (management quality, organisational targets, owner-structure, sales growth, job offers and obtained profit)
- 2) Locational factors (absolute & relative characteristics like lot-size, space for expansion, distance to customers and suppliers)
- 3) Firm external factors (government policy, regional economic structure, technological processes)

The Lloyd and Dicken (1977) model is based on the power of different actors and reflects to what extent the firm is able to control the situation and to what extent the firm has to accept external changes. This has to do with the fact that a firm has more control about the changes and developments in the firm itself, than on the firm environment. An environment, that contains certain site factors, which are more or less fixed and can only be changed in the long run, while other factors may change within a short period (Van Dijk & Pellenbarg, 2000).

Following Hayter (1997) a division in three types of location theories can be made: a neo-classical, a behavioural and an institutional approach. Very recently, the evolutionary approach was introduced and provides a new approach towards the location theory. Dating back to the 1820's, the basics of firm location theory are to be found within classical and neoclassical theories. From the 1950's and 1960's onwards, three different sets of locational approaches were introduced, partly based on, or opposing the neoclassical theories, which became less adequate to explain the growth of large multinational enterprises (Pen, 2002). The three locational approaches are defined as:

- a) Behavioural location theories,
- b) Institutional location theories and
- c) The evolutionary approach towards location theory.

A more detailed description, overview and comparison of these four theoretical developments are to be found in the remainder of this chapter. Furthermore, an overview of more behavioural migration studies results in an overview of location factors on the local scale.

## 2.2. Classical location theories

These theories try to create general models of finding the optimal location for a company, based on considerations concerning spatially differentiating costs and/or returns, placing the costs of transportation centrally (De Boer *et al.*, 2001).

The location theory originated from the classic school of economics, where, based on agricultural and industrial experience, mostly German scholars developed broadly accepted theories on the optimal location of a firm (Scott, 2000).

In an attempt to understand the changing land use, when moving away from the market, Von Thünen (1826) developed his Von Thünen model. It was the first location model where continuous production space and a single final market were used. It generated the entire corpus of theories on the urban location of economic activities (Capello, 2007).

Founding father of the industrial location theory is Alfred Weber (1909, 1929). His triangular model, with two materials  $M_1$ ,  $M_2$  and the market  $M_3$  is known as the Weber (location-production) triangle (McCann, 2001). With a profit-maximizing rationale for the firm, the location it will locate is where the profits are maximized: the Weber optimum location. This point was calculated by implementing transport costs, labour costs and external agglomeration forces (Bale, 1975).

When labour and land price vary over space, isodapanes are used to calculate how much local factor prices have to fall relative to the Weber optimum in order for a firm to move there.

With changing input suppliers and output markets, the optimum location of the firm is constantly changing to ensure profitability. Although firms hardly move in reality, this does not limit the applicability of the Weber model to real-world phenomena (McCann, 2001). In particular, majority of subsequent writers have gained something from the Weberian framework when formulating their own theories (Mariotti, 2005).

### 2.3. Neoclassical location theories

Neoclassical theories are closely connected to the classical theories, but differentiate on substantial issues. These are: the more market orientation, the option of more market forms (other than perfect competition), the focus on maximizing revenue, the implementation of internal agglomeration effects and production factor substitution (Atzema *et al.*, 2002).

Christaller (1933) was the first to start discussing the urban system, resulting in research by various scholars on the central-place theory. A theory, where the size and spatial distribution of the urban centre exhibit something of a hierarchical pyramidal pattern (McCann, 2001).

Christaller shifted the attention from agriculture and industry to the service sector and the accessibility of the consumer. He introduced three still important concepts: a minimum carrying capacity in order to offer a service, a threshold; the maximum distance a consumer is willing to cover to reach a service, the range; and the economic man, where both consumer and consumer are assumed to know exactly what the market has to offer. The central places consist of a hierarchy, where service and consumer focused firms consciously choose their location and bigger cities consist of more (carrying) functions and a bigger service area (Atzema *et al.*, 2002).

Losch (1954), with a more deductive approach, contributed to the central-place theory by understanding the urban system from a microeconomic approach. Based on the effects of distance and agglomeration effects on delivered prices and demand, Losch (1954) concludes that a central primal city will dominate the economy of any spatial area, where the hinterland is characterized by smaller settlements and alternating areas of industrial concentration and dispersion (McCann, 2001). Most importantly, he shows that industrial concentration and urbanization can arise independently of local peculiarity or particularity (Parr, 2002).

Another market area approach is constructed by Hoover (1948) in his book “The Location of Economic Activity.” Although based on a market approach, it strongly relates to Weber, as the approach is focussed on the costs. In addition to the external agglomeration effects, he introduces the internal agglomeration effects: a relation between production costs and size of the production whereby with an increasing production the costs of a produced unit decreases (Atzema *et al.*, 2002).

Based on these new insights Hoover (1948) classifies agglomeration economies by different natures, which are the result of different locations.

First, the internal returns to scale, where efficiency gains are a result of the size of a firm.

Second, the economies of localization, where within a particular industrial sector, firms benefit from all three of Marshall’s (1920) sources of agglomeration: a) information spillovers, b) non-traded local inputs and c) a local skilled-labour pool.

Third, the economics of urbanization, which accrue to firms across different sectors as they respond to the large market possibilities that exist in urban areas (McCann, 2001).

Hotelling (1929) describes firms’ spatial interdependence within the context of a locational game. A so called locational interdependence approach (De Boer *et al.*, 2001).

In a monopolistic market, based on non-price competition, the result is a clustering together in space for reasons of spatial competition. “The Hotelling Paradox,” the fact that firms attempt to make more or less same products appear very differently (in non-price competition) is the major reason retail parks and central city shopping areas arise.

Another important conclusion of Hotelling is that a consumer, located more closely to a spatial cluster of firms, experiences a welfare gain compared to other consumers further away (McCann, 2001). This is an important observation concerning, the previously mentioned, agglomeration economics.

Moses (1958) was the first to successfully fuse the production theory with the location theory (McCann, 1993). As he later states: “*Where input substitution is possible, all location problems become production problems and all production problems become location problems* (McCann, 2001).”

In Moses’ 1958 work “Location and the Theory of Production” he allows the possibility of substitution of the input factors labour and resources. Increased production creates input substitution, which means a different mix of production factors. In other words, a changing size of production leads to input substitution and to another optimal location (Atzema *et al.*, 2002).

Two macro-economic models on regional economic development perspectives are originally classified as neoclassical and are useful in this thesis as they are based upon the previously mentioned agglomeration effects: Perroux (1950) and Myrdal (1957).

Perroux (1950) introduced a growth pole theory, where decisions made by key large firms (the growth poles) have major financial implications for other firms which are linked to the key firm through customer-supplier relationships (McCann, 2001). These local effects, related to technical polarisation, could be negative and positive and are better known as “backwash” and respectively “spread” effects.

Myrdal (1957) introduced the cumulative causation theory: economic activities are concentrated when the regional production milieu and investment opportunities are advantageous, thereby leading towards economic development (Atzema *et al.*, 2002).

Terms involved in this process are efficiency, competitiveness, communication- and transport hubs, agglomeration effects and Perroux’ backwash and spread effects.

These theories are connected by the fact that European regional policy in the 1960’s was partly focused on the Perroux’ growth poles (Atzema *et al.*, 2002). Any region tries to succeed in attracting a key firm (growth pole) to their area; where from this firm economic growth should develop (cumulative causation). Nowadays evolutionary economists use both theories on competition and innovation, relating to the existence of regional networks between firms.

The most recent interest in the neoclassical location theories can be found in the works of Krugman (1991) and Fujita *et al* (1999) as they developed the “New Economic Geography models (NEG).” This led to an increased awareness of geography among economists.

The NEG models are essentially cumulative causation models, based upon the fact that when a region has got a head start, it attracts new firms and labour because it is able to exploit economies of scale and variety (Van Dijk *et al.*, 2009).

McCann (2001) describes the NEG as an explanatory model on firm relocation based on three issues, namely product variety competition, economies of scale, and transport costs within place-specific considerations, within a framework of labour mobility.

However, Pellenbarg (In: De Boer *et al.*, 2001) concludes that the practical explanatory power and usability of this theory is limited, as the theory is based on market size and mobility of the production factors. The choice for these factors is based on scientific modelling strategies, thereby, ignoring important practical aspects related to firm relocation.

Mariotti (2005) also finds similar conclusions as “*hardly any attention is paid to crucial spatial behaviour of firms.*”

## **2.4. Behavioural location theories**

In the 1960s the behavioural location theory starts to come to the centre of attention among economic geographers. Behavioural location theory interprets firms as agents with limited information, bounded rationality, that settle for sub-optimal outcomes rather than maximum profits (Cyert and March, 1963). The theory looks at entrepreneurs as a ‘satisficer’ (administrative) person with conflicting goals, limited levels of knowledge and control of the environment and irrationality of perception and behaviour (Hayter, 1997). Typical for the behavioural theory is the inductive approach, which reasons that from research on individual, entrepreneurial behaviour and motives a more generalising theory can be constructed. This directly opposes the neoclassical deductive approach. Mariotti (2005) also states that the behavioural approach relies on questionnaires and detailed empirical work rather than on explanatory models.

Three key elements are at the foundation of the behavioural location theories, namely ‘Bounded rationality,’ ‘Conflicting goals’ and ‘Incomplete environmental adaption (Cyert & March, 1992).’

### **2.4.1. Bounded rationality**

Bounded rationality is a concept developed by Simon (1955), who used a more psychological approach towards economic geography. He proposes a ‘satisficer’ (administrative) person as an alternative to the neoclassical ‘homo economicus.’ Following this concept, Hayter (1997) describes the location choice of a ‘satisficing’ firm as follows. The firm considers a limited number of choices, searches and evaluates alternatives in a highly sequential way; and chooses the first solution that is ‘satisfactory.’

Later, (Pred, 1967; 1969) based his behavioural matrix on this concept. It involves two concepts, one, the amount of information and two, the ability to use this information, constructed on the horizontal and vertical axe, thereby constructing a matrix (Scott, 2000). The optimal location is the top right corner, representing optimal information and use of this information, which in practice proves very difficult. Atzema *et al.* (2002) describe the conceptual value of the behavioural matrix, as empirical grounds are non existent. It does however relate to an evolutionary argument, which shows the relationship between firm and its uncertain environment. Alchian (1950) present the ‘adapter’ and the ‘adopter,’ which are used in neoclassical and behavioural studies, but also find their way in the strategic management as presented in 2.5.1. The ‘adopter’ is related to behavioural studies and can be characterized as Darwinian, in that the environment ‘adopts’ the firms which are better suited to the environment, thereby the probability of success of an individual firm is equal, as no particular knowledge was known beforehand (McCann, 2001). The ‘adapter’ shows neoclassical characteristics and is closely associated with large firms, which at the scale of international locational choice refers to Multi National Enterprises (MNE’s). The ‘adapter’ is able to *‘utilize resources in order to acquire and process information of their market environment, [...] use the information to their own advantage, [...] thereby increasing the probability of making a profitable strategic decision [...] and maximizing the likelihood of their own success* (McCann, 2001: p. 39-40).’

Here lies a strong linkage with the “Ownership” component in Dunning’s OLI-paradigm, which is to be mentioned in the Geography of Enterprise approach of 2.5.1.



### **2.4.2. *Conflicting goals***

Cyert and March (1963) criticize the profit-maximization neoclassical location theory by referring to the term 'conflicting goals.' It refers to the multi-level firm, with multi-level decision makers, with multiple goals and objectives, based on different criteria. This leads a firm to 'satisfice,' whereby the firm will aim to achieve a satisfactory level of performance across a range of measures (McCann, 2001).

Pen (2002) emphasizes the focus on firm internal decision making when a locational decision has to be made. McCann (2001) shows these conflicting goals within the internal decision making, by calculating that different objectives result in different location choices by a firm. In his example profit-maximizing, revenue-maximizing and cost-minimizing goals are plotted in a diagram, resulting in different locational choices by the firm, as dominant objectives vary.

### **2.4.3. *Incomplete environmental adaption***

Less frequently mentioned is the simplification of the complex location problem by the entrepreneurs, based on three related sorts of rationality.

The first two forms simplify the location decision of the entrepreneur by firstly, reaching goals on an incremental way and secondly, using standard rules and procedures (procedural rationality). The third, expressive rationality, contains the personal insights of a person (Meester, 1999). Hereby the terms perception, cognition and mental map play a role.

These forms of rationalities together cause the behaviour of an entrepreneur not only to be determined by the environment, but by history, firm internal procedures and incomplete information exchange between firm and environment (Pen, 2002).

Concluding remark on the behavioural approach in economic geography is that it is focussing too much on the bounded rationality and the behavioural matrix, thereby loosing interest among economic geographers. Pen (2002) emphasizes the missed opportunity for the behavioural approach in economic geography, by ignoring "*The behavioural theory of the firm* (Cyert & March, 1963)." This book has brought attention towards the firm internal reasoning and has proven very useful in theories of strategic management, on which chapter 2.5.1. elaborates. Meester (1999) also finds this loss of interest in the behavioural approach in the economic geography, but instead of criticizing the behavioural theory he finds that the institutional approach is taking over the attention of economic geographers.

Attempts have been made to revive the behavioural approach, e.g. Louw (1996) and also Pen (2002) opts for a revival, although it does need to implement certain institutional factors.

## **2.5. Institutional location theories**

The more modern institutional location theory is a result of the closely to the behavioural approach related geography of enterprise. The biggest difference lies in the fact that in the behavioural approach the firm 'uses' the environment as a 'bed of information,' whereby in the institutional (and evolutionary) approach the firm is environment-based.

### **2.5.1. *The Geography of Enterprise***

The geography of enterprise arose in the economic geography in the 1960s and 70s as a more radical way of thinking, showing discontent with politics and the economic recession.

Founding fathers McNee (1960) and Krumme (1969) study the influence of management of large multinational enterprises on the locational choices of establishments.

Hayter and Watts (1983, p. 157) describe the geography of enterprise as "*the study of the influence of the policies and structures of multiproduct, multiplant enterprises on changes in industrial location and on processes of regional economic development.*"

Pellenbarg (In: Boer, L. de *et al.*, 2001) emphasizes the great amount of attention towards firm internal structures and strategies as causes of the spatial behaviour.

Within the Geography of Enterprise it is stated that the location choice, of where to start a firm, or where to move to, is part of a greater strategy from a MNE. De Smidt & Wever (1990) refer to these locational effects of MNE strategy to be part of a strategic choice approach, or strategic management. The goal of strategic management within a firm is to take in account their own strengths and weaknesses and to judge chances and threats from their environment in which they are (or attempt to be) active. This is better known as the SWOT-analysis.

Three approaches where location choice can be seen as just one element of strategic policy of a firm are described in Atzema *et al.* (2002). They provide insights into the background motivation of firms to enter a particular country and are thereby closely related to chapter 3. Two motives prove to have a vital role in these approaches:

- a) Market considerations (M) and
- b) Costs considerations (C).

The first approach, Hakanson (1979), shows with his spatial development model, the market considerations as motive for firms to find new markets. As saturation is taking place on the home market, there is need to find foreign markets for the products of the firm. Hakanson (1979) develops a model of the strategy of a firm as it penetrates foreign market, thereby gradually increasing involvement and control, but keeping headquarters in the homeland. The model starts with the use of a trading agent in the host country, followed by the establishment of a sales office, whereby a location choice has to be made, and finally the firm starts producing its product in the host country, whereby another location decision has to be made.

The second approach is developed by Vernon (1966), as he introduced his famous product lifecycle approach. Although at first sight it seems a model based on the search for the lowest production costs, it is based upon product development and contains parts of both M and C considerations. The basic model contains the markets of the USA, Europe and developing nations (Atzema *et al.*, 2002).

When a product is being developed or is just being released on the market, the costs for the firm are high until the moment the public knows about the product and consumption rises quickly. The firm enjoys the innovative advantage, plus the internal agglomeration effects from the increased production. This allows the firm to lower prices and sell even more of their product, thereby maximizing their profits and exporting to worldwide markets. This lasts until the moment the competition catches up and introduces similar products, thereby pressurising profits and making the original innovative firm look to lower costs of production by moving the production elsewhere. In Vernon (1966)'s example Europe is the cheaper production site, which makes firms move production to Europe, where at the same time it tries to take over the European market. Eventually, as it is cheaper, Europe exports to the USA and in a later stage also towards the developing nations. This lasts up until both the European and USA markets are saturated, making firms move their establishment again. This time the firm moves towards developing countries, where the production costs are lower, letting the entire process start all over.

The third and last approach is developed by Dunning (1977, 1988) and is better known as the OLI-paradigm. It combines both M and C considerations and can be seen as a conceptual framework for analysing host country determinants of FDI, whereby the: “O” in the paradigm stands for ownership specific advantages of firms and addresses the issue of why some firms become TNC’s while others do not. “I” component (internalization advantages) explains why firms may prefer to exploit these advantages (such as technology or other know-how) by “internalizing” them through FDI rather than selling them externally to third parties.

“L” stands for locational advantages of host countries and embraces factors determining the choice by TNC’s of a specific host country (Dunning, 1988; UNCTAD, 2009).

It is the “Location” element that is of special interest in this thesis, as seen in chapter 3. Dunning & Lundan (2008) give an excellent overview of the variables involved in the OLI-paradigm, adding context to the arguments for foreign firm establishment in Hungary. However, as it does not fit into this theoretical framework, it is added to the addenda. Atzema *et al.* (2002) point out that with an increasingly globalized and international world, the importance of the location choice of a MNE rises, as the location (choice) itself has become a part in the competition on the international market.

Although all three approaches are based on firm internal motivation, the importance of external factors should not be neglected. Product development has proven to be better in certain areas (Silicon Valley) and distribution centres relocate to better serve new and upcoming markets. Similarly, Dicken & Lloyd (1999) show that within a growing firm, the need for export increases, thereby having to find possible new (geographical) markets, markets shaped by external factors. Pen (2002) shows the large amount of factors involved with the strategy of a firm, thereby having to use case studies as empirical method to study this diversity.

### **2.5.2. The more modern institutional location theory**

The 1980s brought a common view that economic activity is socially and institutionally situated, as it is shaped by society’s cultural institutions and value systems rather than by firm behaviour (Krumme, 1969). The institutional approach focuses on the interaction between firms instead of the behaviour of individual firms. They have to negotiate with deliverers and suppliers, local, regional or national governments, labour unions and other institutions, about prices, wages, taxes, subsidies, infrastructure, and other key factors in the production process of the firm (Pellenbarg *et al.*, 2002). It brought forth more optimistic modern theories, showing successful post-fordistic growth (Pen, 2002).

Atzema *et al.* (2002), in accordance with Martin (2000), define three approaches showing institutional economic influence on contemporary economic geography.

The first is the ‘transaction cost’ approach by Coase (1937), later improved by Williamson (1985), which is explained in chapter 3.2.2.

The second, the ‘embeddedness approach’ by Granovetter (1985), shows that economic activities are ‘embedded’ in an institutional frame that is based on cultural values, social structures and networks.

The third, the evolutionary approach, is a separate location approach according to Atzema *et al.* (2002), although many economic geographers refer to evolutionary and institutional economics as one and the same (Martin, 2003). This thesis, in accordance with Atzema *et al.* (2002) and Mariotti (2005), also distinguishes the evolutionary approach as a new location approach and provides insights into to the evolutionary location approach in chapter 2.6.

Within the institutional approach there is a key role for 'external' or 'institutional' factors (i.e. spatial adjustments as expansion, merger, acquisition and take-over, but also trust, reciprocity, cooperation and convention) (Mariotti, 2005). These factors play at all levels in the economy, from the structure and functions of the firm, through the operation of markets, to the form of state intervention (Hayter, 1997; Martin, 2000).

The approach also shows a general focus on regions, instead of firms, as places to gain competitor's advantage in the globalising economy. As in the 'geography of enterprise' view, the firm is in interaction with its environment, a regional system, also referred to as an 'industrial district' (McNee, 1960). The industrial district school (Amin, 2000) focuses on the relationships between firms and the local community (formal and informal social, economic and political relations) as a determinate factor of long-term economic development.

Furthermore, the learning process is a key component of the institutional approach. This is related to the concept of innovation, which in turn is strongly related to the production, dissemination and application of knowledge. Cooke and Morgan (1998) identify network relationships, trust and loyalty among knowledgeable and experienced leaders in particular sectors, as key components in learning and innovation. In their 'learning region' writings Cooke and Morgan (1998) also emphasise the role of public institutions, as these can act as 'animateurs' of local innovation systems. Public institutions are not only identifying the points in the regional economy where self-sustained innovation can be activated, but also become major actors in promoting the creation of networks (Mariotti, 2005).

Pen (2002) sums up the developments in the institutional approach and finds a common research goal in the explanation of growth and development of firms that are regionally clustered. Mariotti (2005) finds institutional location behaviour to be the result of a firm's negotiations with a variety of local and national players.

## **2.6. The evolutionary approach**

Until recently, the evolutionary economics has had a relatively minor impact on economic geography, or as Martin (2003) stated economic geographers tend to refer to evolutionary and institutional economics as one and the same.

The evolutionary approach states that only a share of the firms in a region can adapt to the changing market environments, thereby selecting only the successful adapters to survive and contribute to a region's economic development.

Atzema *et al.* (2002) name the importance of Schumpeter (1942), as bridge-builder between the behavioural and evolutionary theory and introducing the nowadays concepts of entrepreneurship and innovation. But most famous evolutionary work has been Nelson & Winter (1982)'s publication "*An Evolutionary Theory of Economic Change.*" It contains three basic elements: first, bounded rationality in decision making in firms, second, decision making is based on routines and steady decision making procedures and third, because of the changing environment the firm should show innovative behaviour (Atzema *et al.*, 2002). It is based on Schumpeter (1942), but also uses concepts from the behaviouralist Simon (1955). Nelson & Winter (1982) relate the behaviour and role of small innovative firms to the slow decision making in large firms (MNE's), hereby laying the groundwork for the concept of the "spin-off" firm. This highly innovative and mobile firm gained attention in firm demography. Firm demography uses quantitative analysis and demographic techniques to describe entry and exit of firms and how survival depends on age, location and parent company, therefore being frequently used in the evolutionary approach (Mariotti, 2005).

The key evolutionary concepts are translated in economic geography as innovation, competition and routine. This path dependence and routine creates unwillingness of entrepreneurs to enter new fields or activities in which they lack experience and also leads entrepreneurs not to change location (Brons and Pellenberg, 2003).

Concluding, the evolutionary approach to location and relocation theory is in an early stage of development and has not delivered statements on relocation yet. Still, it presents a good background about the relocation determinants, as firms are less willing to relocate because of path dependence and inertia (Mariotti, 2005).

## 2.7. Comparison, critics and conclusions on location theories

To allow better comparison between the location theories, they are summed in Table 2.1.

Features	(Neo-)classical	Behavioural	Institutional
Founder and famous authors	Alfred Weber (1909), Von Thünen, Lösch, Hotelling, Palander	Allan Pred (1979; 1969), Townroe, Keeble, Stafford, North, Dicken	Robert McNee (1968), Krumme, Galbraith, Rees, Steed, Taylor, Storper
Key concepts	Homo economicus/ optimizer/economic man, instrumental rational, fully informed	Satisficer, bounded and procedural rational, limited information, subjectivity	Technostructure, strategy, structure and power, rational choice marxism, monopoly/oligopoly
Scientific area	Micro and general economics, econometrics	Sociology, psychology (human geography)	Management & Organisation, business economics
Building stones	Minimal costs, maximum benefits, fully competition	Information, action space and aspiration level	Growth, stability and profit
Analysis	Macro, statistics, explaining spatial pattern and dynamics; modelling	Micro, fieldwork, explaining spatial behaviour; describing and interpreting	Meso, firm data, explaining Spatial interaction; structuring
Method	Construct models	Interviews and surveys	Case studies
Criticism	Unrealistic assumption, focus on calculation, and neglect richness of geography	Too much opposing against (neo-)classical theory, process and firm is a black box, repetition of much of the same	Hardly applicable in practice, despite interest in firm strategy comparable criticism as the behavioural approach
Current topic	New economic geography by Krugman	Revival?	Clusters/industrial districts and the cultural turn
Interest	Increasing	Minor, but slight increase	Peak and in fashion

Source: based on Hayter (1997, p. 80) and Mariotti & Pen (2002).

In the 1960s, (neo-) classical location theories became increasingly criticised as being unrealistic and not reflecting real-world circumstances. This paved the way for the birth of the behavioural approach, on which most firm migration studies have been based ever since. The behavioural theories silenced in the 1970s and 1980s as there was an increasing interest in society's cultural institutions, value systems and innovation. This led to institutional approaches, stating location behaviour to be the result of a firm's negotiations with a variety of local and national players. Most recently, the 1990s saw the rise of the evolutionary



approach in economic geography. It focuses on routine behaviour instead of rational choice within a firm.

A view on Table 2.1 and Table 2.2 shows the shift from market and cost related ‘hard’ factors, typical of neoclassical location theory, to the internal and external ‘soft’ factors of the behavioural, institutional and evolutionary approaches. This is labelled by Martin (2000) as the ‘Institutional turn’ in economic geography, a reorientation that can be seen in all social sciences (Brons and Pellenbarg, 2003).

**Table 2.2: Relocation approaches and determinants**

<b>Theoretical framework</b>	<b>Key concepts</b>	<b>Type of factors</b>
<i>Neoclassical theory</i>	Market situation, cost-reduction	( <i>Location</i> factors)
<i>Behavioural theory</i>	Information, abilities, perception and images	( <i>Internal</i> factors)
<i>Institutional theory</i>	Networks, trust, social capital	( <i>Institutional</i> factors)
<i>Evolutionary theory</i>	Path dependence, routine	( <i>External</i> factors)

Source: based on Mariotti (2005)

Mariotti (2005) provides insight in the key factors in each of the location theories, on which Table 2.2 is based. She explains that in the neoclassical approach a firm is a black box, responding to its environment completely rational. In the behavioural approach a firm is a site of decision-making involving conflict, uncertainty, problem stimulating search, learning and adaptation over time. And, that in both the institutional and evolutionary approaches the firm is defined by its interactions with the environment (Mariotti, 2005).

When comparing the approaches individually, some commonly shared critics explain the strong and weak points of the approaches.

The (neo-) classical approach argues that in equilibrium there is no need for further relocation, as the optimal location is fixed. There is also no cost involved with relocating, firm internal factors are not taken in account, the ‘homo economicus’ principle is outdated and far too simplified, there is no factor ‘time’ in the neoclassical models and space is assumed to be homogenised and isotropic.

The behavioural approach is considered to be too descriptive and explorative; there is an ignorance of (neoclassical) ‘hard’ factors and it focuses too much on the imperfections of the neoclassical approach. More importantly, there is too little room for firm internal functioning and decision making and too much attention for the satisficing and experimental psychology. The institutional approach suffers from a limited value of predictions and practical application in policy-making. There is no explanation for SME’s and the entire decision making process of multinationals is almost impossible to overlook. The last commentaries are the limited insight in the decision making concerning the location choice and the neglect of the other two location approaches. The evolutionary approach is too recent to have received comments.

The neoclassical and the behavioural approach have one view in common: the firm as an active decision making agent in a static environment. In both views the environment is a surface of location factors, or ‘bed of information’ that is processed by the firm (Hayter, 1997). The institutional (evolutionary) approach considers the firm to be environment-based.

All things considered, Brons and Pellenbarg (2003) conclude that the behavioural, institutional and evolutionary approaches overlap and, to some extent, they tend to complement rather than exclude each other. Also, Pen (2002) states that firm relocation

research should aim more at the integration of the various location theories and allow for a debate between these theories. The most recent statement is given by Mariotti (2005), as she pleads that economic geographers and spatial economists should try to integrate the qualitative and quantitative approaches. The aim of these scholars is that integration should lead to new insights and an increased awareness of (re) location as economic principle.

## 2.8. Firm migration studies

With no existing grand location theory, firm migration studies provide insight into the locational factors. Here, the Dutch economic geographic firm migration studies, using a behavioural approach, offer an understanding of the location factors. Important to recognise here, is that the local and regional spatial scale movements are studied in these firm migration studies. This asks for another set of location factors to explain these local migration patterns (Pellenbarg, 1985).

Research by B&A groep (1997) and Buck Consultants (1997), both referred to in Pen (2002), Sloterdijk & Van Steen (1994) and Van Steen (1998) shows that there are large amounts of pull factors that make a firm decide to establish on a particular site. Longitudinal firm migration research at the Faculty of Spatial Sciences at the University of Groningen, initiated by Pellenbarg (1977) and followed by Besselink *et al.* (1988) and Kok *et al.* (1999), both referred to in Pen (2002), also provides insight in the historical development of the pull factors. Most important results are given in table 2.3 and 2.4.

**Table 2.3: The most important local and regional location factors**

INDUSTRY	TRADE	TRANSPORTATION	SERVICES
1. Road accessibility	Road accessibility	Road accessibility	Parking
2. Load & discharge	Load & discharge	Parking	Road accessibility
3. Parking	Parking	Load & discharge	Workforce
4. Workforce	Premises	Telecom facilities	Premises
5. Premises	Telecom facilities	Workforce	Telecom facilities
6. Telecom facilities	Workforce	Premises	Prestigious site
7. Land rent/price	Land rent/price	Land rent/price	Public transport access
8. Expansion possible	Prestigious site	Prestigious site	Land rent/price
9. Prestigious site	Expansion possible	Telecom services	Quality landscape
10. Public transport access	Public transport access	Expansion possible	Expansion possible

Source: B&A 1997, referred to in Pen (2002)

**Table 2.4: The most important location factors**

Top 5, all sectors	Top 4, Business services
1. Prestigious building	1. Prestigious location
2. Proximity of clients and suppliers	2. Good labour mentality
3. Expansion possibilities	3. Government's positive attitude
4. (Market) location	4. Sufficient high skilled workforce
5. Premises availability	

Source: Kok *et al.*, 1999, ref. to in Pen, 2002      Source: Sloterdijk & Van Steen, 1994

These location factors show a clear dominance from the firm external factors and show an increased attention to the quality aspects of the location and the professional (accessible) buildings, as mentioned by Van Steen (1998) and De Boer *et al.* (2002). These locational pull factors are the frame of reference for chapter 5's office location map.

## 2.9. Concluding statements

- Competition among Multi National Enterprises (MNE's) makes the location choice part of company strategy, thereby increasing its importance in an increasingly globalised world
- As MNE's are 'adapters,' maximizing the likelihood of their success, the Ownership component, together with the environment's Locational component, are the two most important OLI-paradigm advantages
- The decision of MNE's to enter a particular country to (re) locate, is based upon market (access)- and (factor) cost considerations
- Despite the focus on internal, institutional and external factors after the 'Institutional turn,' the labour costs, production costs and external and internal agglomeration forces of the classical (Weber, 1929) and neoclassical (Hoover, 1948) theories, are still important in the location decision of a relocating firm as the so-called 'hard' factors
- The environment-based approach towards the firm of the institutional and evolutionary location theories, together with its regional focus, increases the importance of the local and regional location factors in understanding firm location behaviour
- The behaviourally orientated firm migration studies show insight into these local location factors
- The local location factors are used in this thesis to explain the foreign office-based firm's locational choices. Table 2.3 and 2.4 show four groups of interrelated factors, the first, image and quality, the second, the accessibility, the third, the institutional and fourth, the 'hard' agglomeration factors.

## **3) The movement of foreign firms towards Hungary**

### **3.1. Introduction**

To find the reasoning behind the movement of foreign firms towards Hungary, an addendum to the theoretical framework will provide details on internationalization, MNE's, FDI and factors involved. This explains the macro-economic development of the demand side by foreign firms in Hungary. The macro-economic supply side finds its history in political, social, cultural and economic development of Hungary. The location of the FDI, the entry modes and the pull factors involved in attracting FDI form the remainder of the chapter.

### **3.2. Theories and operationalization of internationalization**

Before anything useful can be said about the foreign firms in the Hungarian and Budapest market, an understanding of the internationalization strategies and investment modes is necessary. Atzema *et al.* (2002), Pen (2002) and Mariotti (2005) provide an extensive analysis of these practicalities, which is summarized below. Also, Bhagwati (2004) and the UNCTAD (2004) provide insight in nowadays buzzwords. Thereafter a more theoretical structure provides insight in contemporary global thinking and developments.

#### **3.2.1. Theories on Internationalization**

As theories on globalization and internationalization are changing over time, a historic note is added to the internationalization theories of Dunning (1988) and Porter (1990) that show the contemporary strategic behaviour of MNE's (Dikova, 2005). Furthermore, these theories show under what circumstances FDI is being implemented in a MNE strategy.

Already in the 1980s, Rugman (1980) was the first scholar to state that "*the theory of FDI is really a theory on MNE.*" Theories on FDI emphasize the firm-specific advantages enjoyed by the MNE to explain foreign production. This exploit of advantages is best explained by the concept of internalization (Rugman, 1980), which in nowadays OLI-paradigm is one of the three pillars to explain FDI. Mariotti (2005) also finds FDI as the main tool of internationalisation for MNE's.

There are basically three theories on FDI, which lead to the use and development of nowadays OLI-paradigm to explain FDI.

The first, dynamic, location theory, is the product life cycle of Vernon (1966). An analysis of this theory can be found in chapter 2.5.1.

The second, the monopolistic advantage theory by Hymer (1960), brought the focus from the nation to the firm. It explains why firms can compete in foreign settings against indigenous competitors. The disadvantages of FDI (e.g. information, communication) are outweighed by the firm-specific advantages (e.g. patents, knowledge and economies of scale), leading to a profitable FDI (Giel & Kienberger, 1998).

The third, the transaction cost theory by Williamson (1985), explains why MNE's organize international independencies that could also be handled by markets. It involves bounded rationality of economic agents, as they have to be aware of the potential of cooperation. Organizing this cooperation will incur positive information, enforcement and bargaining costs, also called transaction costs (Williamson, 1985). As nowadays FDI is not exclusively efficiency-driven, there is a need to extend the transaction cost approach with more institutional theory (Dikova, 2005).

Because these (classical) theories could not deal with all the issues emerging in connection with FDI flows, Dunning (1977, 1988) laid out a theoretical paradigm for explaining FDI (Holland *et al.*, 2000). Dunning's OLI-paradigm can be seen as 'extension' of the transaction cost theory (Dikova, 2005) and stresses the importance of location specificity by introducing location-specific advantages. The O, Ownership-specific advantages, the L, Location-specific factors and the I, Internalisation advantages, have been explained in the theoretical framework (2.5.1) and in appendix A.

Over time however, changes in the global economy affect scholarly thinking about FDI and MNE.

Dunning (1998) in his work "*Location and the Multinational Enterprise: A Neglected Factor*," finds three important changes in the global economy:

- Increased importance of intangible assets (intellectual capital)
- A changing role of location-bound assets (with governments creating assets and cluster benefits)
- The opportunity for common governance (with more attention for specific motives, determinants and consequences of MNE FDI).

In short, this means that there is a growing importance of the knowledge-related infrastructure and the sub-national (regional) scale at which these globalization processes take place.

Similarly, Atzema *et al.* (2002) find the importance of knowledge and regions to be related to the existence of networks. Underlining thought is that within a network no firm stands on its own. Until recently, smaller firms are more dependent on other firms and large MNE's are internalizing relations, which is also called vertical integration. But, the MNE's nowadays are using a back-to-the-core-activities strategy, leading to vertical disintegration, thereby using local suppliers and subcontractors. This emphasizes the importance of these regional networks.

This regional focus on globalization has been theoretically and empirically supported by a variety of scholars. Castells (1996; referred to in Van Oort *et al.*, 2006) speaks of the 'global-local paradox,' whereby on the one side the firm networks spread out internationally, but where on the other, the regional and local scale increased in importance, as the integration of economic activities takes place on these levels. Hastenberg (1999), following Castells' paradox, speaks of the increasing importance of regional establishment climates, where outsourcing, cooperation and knowledge exchange can take place, as establishment (or pull) factor in international delocalisation decisions. Furthermore, the institutional approach emphasizes the importance of the regions as spatial level in the globalization debate.

This regional approach to globalization finds strong grounds in the work of Porter (1990), who triggered attention for regional clusters of related sectors and industries, with a view to raising productivity, innovativeness and competitiveness in general (Visser & Atzema, 2007).

Porter (1990) bases the competition strengths of countries on the so-called 'diamond.'

It consists of four factors:

- 1) Factor conditions: basic and advanced factors, like Dunning's 'L' factor
- 2) Demand conditions: when home markets demand quality products, leading to innovation, which corresponds with economic development
- 3) Firm strategy, structure and rivalry: norms and values influencing firms, organisations and management, also containing a strong competition element



- 4) Related and supporting industries: networks, clusters and value chains: production, buying, R&D and marketing are interrelated, resulting in networks of subcontractors and outsourcing firms (Atzema *et al.*, 2002).

Porter (1990) argues that clustering is an alternative form of organizing, which provides firms with another way of organizing their transactions. In an environment of rapidly changing information and technology, the spatial industrial organization allows firms to maximize the transfer of technology and information flows. Furthermore, the proximity engenders mutual visibility of competitive developments, spurring all firms individually to improve their competitiveness, which results in an increased competitiveness of the cluster as a whole (McCann, 2002).

With all the use of the term clustering of activity, Gordon and McCann (2000) state that there has been obscurity about almost synonymously used terms as agglomeration, clusters, complexes, new industrial districts, embeddedness and milieus. Gordon and McCann (2000) introduce a tripartite, which from a theoretical approach, can strengthen the correct use and thinking of the term cluster. It is stated below in Table 3.1, as it is useful to identify different types of clusters in Hungary.

**Table 3.1: Industrial clusters**

	<b>pure agglomeration</b>	<b>industrial complex</b>	<b>social network</b>
<b>characteristics</b>			
<b>firm size</b>	atomistic	some firms are large	variable
<b>characteristics of relations</b>	non-identifiable fragmented unstable	identifiable stable trading	trust loyalty joint lobbying joint ventures non-opportunistic
<b>membership</b>	open	closed	partially open
<b>access to cluster</b>	rental payments location necessary	internal investment location necessary	history experience location necessary but not sufficient
<b>space outcomes</b>	rent appreciation	no effect on rents	partial rental capitalisation
<b>notion of space</b>	urban	local but not urban	local but not urban
<b>example of cluster</b>	competitive urban economy	steel or chemicals production complex	new industrial areas
<b>analytical approaches</b>	models of pure agglomeration	location-production theory input-output analysis	social network theory (Granovetter)

Source: Gordon and McCann, 2000; McCann, 2002

### 3.2.2. Operationalizational definitions

Maturing markets, maturing products, changing market environments, institutional changes and socio-economic changes are just a handful of reasons for changing the strategy of a firm. How can firms respond to these changes, how is globalizing effecting national and regional markets and what terms are used to describe these processes? These prove to be complex, as goals and markets are continuously changing over time in an increasingly globalised world economy. An overview of establishment modes by MNE's, their motives and contemporary buzzwords follows below.

### 3.2.2.1. Internationalisation strategies

Atzema *et al.* (2002) and Mariotti (2005) find four internationalisation strategies being adopted by firms that take part in the global economy. As the mode of entry differs by the amount of involvement of the firm in the new country, the modes are ranked from lowest to highest involvement.

The first, export, is the most common form of internationalisation as it involves less risk and more control. When there are no substantial barriers to free trade, this is the preferred alternative, but as (non)tariff barriers exist, other modes offer a better strategy.

The second, internationalisation strategic alliance (ISA), is a co-operative relationship with a partner operating backward, forward or in the same stage of a value chain and aimed at the development, distribution, and/or production of products in a foreign market (Gemser *et al.*, 2004). There are two types of ISA, first, the non equity ISA, is characterized by lower risk and commitment, whereby no equity is invested or separate venture is established. The second, equity ISA, is an alliance in which partners own different percent ages of equity in a new venture or project, or an existing firm.

The third, the joint venture, occurs when two or more firms create a separate corporation whose stock is equally shared by the partners. It involves a big commitment and more risks.

Finally, the fourth, FDI, represents the main tool of internationalisation for medium – and large – sized firms and multinationals (Mariotti, 2005). FDI is an investment realised abroad ('outward') or from abroad ('inward') in plants, and can take place either through the opening of branch plants ('greenfield' investment), or through the acquisition of or financial participation in existing firms ('brownfield' investment).

Hastenbergh (1999), in his thesis about FDI in Hungary, emphasizes the 'Socialist Legacy,' involved with the privatization (a type of merger and acquisition (M&A)) of Hungarian firms. This legacy states that brownfield investors are faced with old machinery and technology, lower productivity, inflexible production methods and incapable management. Greenfield investments however, enjoy the benefit of new technology, machinery and create work. This would suggest the choice for greenfield investments to be widely implemented, however, UNCTAD (2010) shows the clear preference for M&A over greenfield investments as the dominant mode of FDI over the past two decades. This discussion continues in chapter 3.4.1, where empirical evidence provides insights in these entry modes.

### 3.2.2.2. Internationalization motives

The motives are clearer, as there are two dominant factors driving international delocalisation. As already mentioned in the 'Geography of enterprise,' Atzema *et al.* (2002) also find cost and market related factors/ motives.

The cost related factors are also labelled as 'vertical investments.' Hereby, the production process is fragmented and relocated elsewhere through FDI, subcontracting or joint ventures with firms in other areas that offer lower production costs. Vertical investments are directed towards less developed or developing countries (e.g. Central and Eastern-Europe or the Far East) where the subcontractor's costs for certain operations (production or processing) are considerably lower (Mariotti, 2005). Here, resource-seeking and cost-saving are involved.

The market related factors are also labelled as 'horizontal investments.' When the production structure of the parent company is reproduced in other geographical contexts through FDI in order to gain a better access to new local markets, these are labelled as horizontal investments.

These are mostly triggered by market saturation and increased competition on the home market (Atzema *et al.*, 2002).

### 3.2.2.3. *Internationalization concepts*

Another important aspect is the understanding of nowadays widely used terms as offshoring, outsourcing and nearshoring. In his article *Muddles over Outsourcing*, Bhagwati (2004) provides insight in this matter. Also, various publications by UNCTAD (2001, 2004) and research by DTZ (2007) and Meyer (2006) show the right use of the various terms.

#### *Outsourcing*

Bhagwati (2004) states that “*the use of the term outsourcing has changed over time.*” Outsourcing in the 1980s referred to the situation when firms expanded their purchases of manufactured physical inputs, as in car companies buying seats from outside the firm. In 2004 outsourcing took on a different meaning: ‘the offshore trade in arm’s length services.’ More practically stated as “long-distance” purchase of services abroad, principally, but not necessarily, via electronic mediums such as the telephone, fax and Internet (Bhagwati, 2004).

Furthermore Bhagwati (2004) uses the WTO (World Trade Organization) system of Modes, as established in the General Agreement on Trade in Services (GATS). Basically, Mode 1: International supply of services is defined as ‘outsourcing’ and Mode 3: when a service provider establishes a commercial presence in another country, are dominating the service trade. International trade in tourism (Mode 2) and programs of temporary or permanent migration (Mode 4) are the other Modes (Bhagwati, 2004).

Mode 1 and 3 are characteristic for the nowadays offshore outsourcing of services, which is occurring up and down the value chain. It involves both low-value-added transactions processing and call centres and high value-added activities, such as software programming, engineering, design, accounting, actuarial expertise, legal and medical advice, and a broad array of business consulting functions (Roach, 2004).

This process of offshore outsourcing of services is also visible in Hungary, as the involvement of these Mode 1 and 3 services is materialized in direct foreign investments. After 2000, the establishment of large firms, managing call centres, back offices and software programmers and the banking and insurance sectors, has been visible in Hungary. These sectors are nowadays even part of the priority sectors of the Hungarian government (Endrődy, 2010).

#### *Offshoring*

Offshoring is the relocation of business processes from one country to another. This includes any business process such as production, manufacturing, or services (DTZ, 2007). This makes offshoring similar to outsourcing when companies hire overseas subcontractors. It differs however, when companies transfer work to the same company in another country, a process known by the name of captive offshoring. Table 3.2 gives an overview of these linkages, as provided by UNCTAD (2004) in their World Investment Report series.

**Table 3.2: An overview of Offshoring and Outsourcing**

		Location	
		Onshore	Offshore
Control	Outsource	Onshore outsourcing	Offshore outsourcing
	Captive	Shared services	Captive offshoring

Source: based on UNCTAD, 2004, p. 148

*Nearshoring*

Nearshoring, nearsourcing and nearshore outsourcing are basically the same. They refer to the delegation of non-core operations or jobs, from internal production within a business to an external entity (such as a subcontractor) that specialises in that operation (DTZ, 2007). As the abroad dimension is missing, a better definition is given by Meyer (2006), who classifies nearshoring as “one type of offshoring and refers to the outsourcing of business or IT processes to providers in nearby countries.”

According to Aspray *et al.* (2006), Hungary is a typical nearshore country, as it takes advantage of its geographic proximity to countries that offshore and builds nearshore businesses to serve Western European countries, especially Germany.

*Offshore-outsourcing versus Captive offshoring*

The major difference between the two types of offshoring is the choice between an internal or external variant. Offshore-outsourcing, is basically a combination of the definitions of offshoring and outsourcing, as it is a border crossing activity, whereby a third party subcontractor takes over the outsourced work. Captive offshoring, is moving work or tasks abroad, but under own control, these are mostly the so-called back-office functions.

To complete the picture on all business process involved in offshoring, an overview of BPO, ITO, KPO and SRO is necessary, as they are closely related to service sector that is taking over global FDI.

Business Process Outsourcing (BPO) is a process involving the re-engineering and relocation of corporate functions and processes to either self-owned or third-party service providers, typically in low-cost locations.

ITO (Information Technology Outsourcing) is using outside vendors to create, maintain, or reengineer IT architectures and systems.

KPO (Knowledge Process Outsourcing) is the outsourcing off high-end knowledge work.

SRO (Software Research Outsourcing) is the outsourcing of R&D activities to specialized IT-domains (DTZ, 2007).

It is BPO, ITO and SRO that are important in this thesis, as they are exactly the types of outsourcing that have been studied in chapter 5.5.6. These three forms of outsourcing together, stand for the worldwide outsourcing in Call Centres, Customer Care Centres, Shared Service Centres (SSCs), Delivery Centres and R&D Centres.

### 3.3. The development of the Hungarian market

To see whether and/ or how these internationalisation theories and practicalities have affected Hungary, there follows a quick glance at the historical development of the Hungarian market, which is special when compared to the development of other Eastern European systems.

This thesis uses the four generally acknowledged categories of reform to describe the Hungarian market. These four categories are necessary elements in the transformation towards more market-based economies: stabilization, liberalization, institutional reforms, and privatization (Van Hastenberg, 1999).

Prior to the system change in 1989-1990 three distinct periods can be defined in the economic development of the country during state-socialism:

- 1945-1968: the dominance of the Soviet model, with forced industrialisation and orientation on the heavy industries
- 1968-1982: the emergence of a unique Hungarian model (the so-called ‘Goulash Communism (CIA, 2011)),’ with introduction of the New Economic Mechanism, leading to some market reforms and the joining of the GATT in 1972 and the IMF in 1974.
- 1982-89: a deepening economic and political crisis, based on failing industry the entire country got into deep economic depression after 1982 (Egedy *et al.*, 2008).

With the change of political system in 1989-90 a deep and comprehensive transition process started in Hungary. Van Hastenberg (1999) shows the importance of privatization and liberalization of prices as the cornerstones of the transition process.

In the early stage of transition, stabilization and liberalization are of vital importance. Stabilization affects macro-economic imbalances, which make it more difficult to gauge the effects of implemented reforms. The most important liberalization element is that prices have to reflect scarcities in markets, for instance, some 80% of consumer prices were liberalized already before 1989.

Institutional reforms cover the establishment of clear property rights, a sound legal and financial infrastructure, and effective government. It is important in making markets work efficiently and supporting growth on the longer term (Van Hastenberg, 1999).

Privatization, the legal transfer of property rights from the state to private agents, was one of the most difficult elements of the transition process. This economic structure, based on private property, affected the banking sector, food industry, retail and service enterprises, the building industry, manufacturing and machinery right at the beginning. Strategic economic sectors like energy, and public services had not been affected until 1995 (Egedy *et al.*, 2008).

The first firms and institutions involved in acquiring property had the best choices and received substantial incentives from the government (tax holidays). However, as the economic situation became more difficult, firms adapted to the market environment and advantages disappeared. This was strengthened by the fact that firms without foreign ownership learned how to operate similarly (Halpern & Körösi, 1998).

Privatization in Hungary has progressed well, starting already in 1988 and proceeding at a fairly brisk pace until 1994, when elections and property law caused privatization to stop. The 1995 fiscal stabilisation package that led to a major improvement of the economic situation contained three classical measures. Firstly, public spending was cut by more than 15%, secondly, the currency was devaluated by 9% and the exchange rates became better controlled and thirdly, a temporary import surcharge of 8 per cent further increased devaluation effects, as it reduced imports and thereby improved the balance of trade (Halpern & Wyplosz, 1998). These measures resulted in the regaining of the privatization momentum in the second half of 1995, with some of the largest privatization deals in Hungary (Van Hastenberg, 1999).

Afterwards, the economy started to grow dynamically from 1997 and macro-economic conditions of the country stabilised by 2000. The privatization process was more or less completed around 1999 (Holland *et al.*, 2000). After 2000 the economic growth continued but its intensity slowed down, it saw an increase in FDI from the service sector from around 2004 and most recently, the global crisis hit Hungary very hard, resulting in the financial aid from the IMF and the EU in 2008.

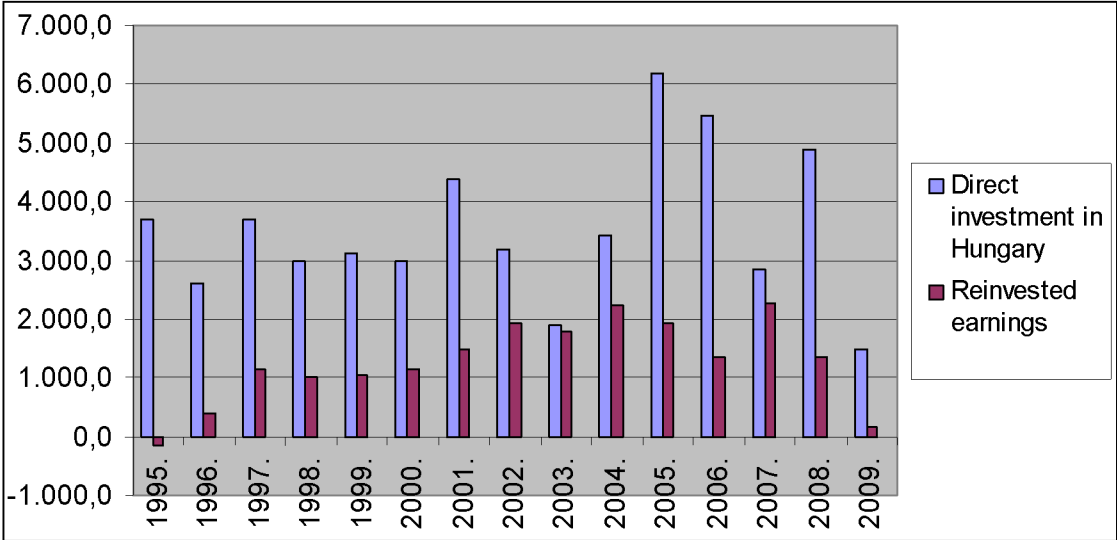
The transition brought about sharp changes in the economic structure of the country in the 1990s. The most significant trend was the increasing weight of services and a declining role of industry and agriculture. In 1990, 46.6 percent of the active earners were employed in the tertiary sector, which increased to 60 percent by 2006. This sectoral shift of importance was especially strong in Budapest, where the ratio of services increased from 62 to 78 percent between 1990 and 2006. On the other hand, the role of industry and agriculture declined continuously until now (Egedy *et al.*, 2008).

Hungary joined the OECD (1996), NATO (1999) and the European Union (2004) and saw its first cluster in 2000 (Novak, 2011).

**3.4. FDI in Hungary**

The importance of FDI by foreign firms within a country has been dealt with in the theories above (See: UNCTAD, 2001). It has helped Hungary modernize industries, create jobs, increase exports and develop economic growth, although on the latter there still is no strong theoretical and empirical evidence linking FDI to economic growth, but they do tend to be highly correlated (Plokker, 1999).

Figure 3.1: Foreign Direct Investment in Hungary (in millions of €)



Source: Magyar Nemzeti Bank, 2009

Figure 3.1 shows that over time there is an increasing role of reinvested earnings, a process closely related by the completion of the privatization around the year 1998. The reinvested earnings amount to more than half of all investments in Hungary (ITDH, 2010). The decrease of FDI after 2001 shows the same characteristics as the global decrease in FDI flows across the world (UNCTAD, 2001) and the revival of FDI flows from 2004 onwards, shows the EU accession in 2004. The shift towards service related FDI, as reported by UNCTAD (2004), is also visible in Hungary, as knowledge-based economic branches (R&D

centres) and other high value-added services (SSCs) account for an increasing share of FDI related to traditional industries (ITDH, 2006). The worldwide shift from manufacturing to service sector FDI, as the most influential in the world's economy, can also be seen from an outsourcing and/or offshoring perspective. This development from offshoring over time can be labelled as the 'first global shift,' involving relocation of manufacturing jobs and the 'second global shift,' where service tasks were relocated (Gál, 2009). This has consequences for the location factors involved when a multinational establishes a subsidiary, as they differ per sector.

After 2008 the global economic crisis has a strong negative impact on both FDI and reinvested earnings. Erste Group Research also shows this negative trend, as FDI into the economy dropped from 4,5% of the GDP (Quarter 4, 2008) to a little under 1% of the GDP (Quarter 2, 2010). A positive third quarter of 2010 proves this trend to have been reversed, with FDI into Hungary reaching about 2% of the GDP (Kotian, 2010).

As, in the annual World Investment Reports by UNCTAD described above, also in Hungary a clear trend is visible concerning the importance of knowledge and service based sectors of the economy. Since the beginning of the 21<sup>st</sup> century, services appear to take over the role of manufacturing as leading component of the incoming foreign direct investments (UNCTAD, 2004). Therefore an analysis of the economic sectors receiving FDI proves necessary.

Plokker (1999) finds the metal industry, the electricity sector and the optical industry to be important for Hungary in the period of 1989-1999.

Own analysis of Table 3.3 shows the tiny role of agriculture, the increasing role of services and the decreasing role of the manufacturing sector. The consequences of the global crisis are clearly visible, as both manufacturing and service sector decrease. Analyzing manufacturing sectors shows machinery and equipment and transport equipment to decrease fast after the 2008 crisis, sectors, characterized by foreign firm dominance. These two, together with electrical and optical equipment dominate the manufacturing sector. The real estate and business activities are strongest among the service FDI, with an increasingly significant role for reinvested earnings (ITDH, 2010). Other strong foreign investment sectors are automotive, IT, logistics and more recently the shared services like back office and/or call centre operations.

**Table 3.3: Foreign Direct Investment by sector (in millions of €)**

<b>Sector</b>	<b>Year</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Agriculture, Hunting, Forestry</b>		140	41	20	14	5	7	19	25	25
<b>Manufacturing</b>		2345	1495	643	941	2073	1158	1286	447	-1428
<b>Services</b>		1527	1182	1467	1634	4215	4203	496	3929	2523

Source: MNB, 2009

The foreign investments in manufacturing are strongly related to the automotive industry, as more than half of all existing equity investments in Hungary in 2004 came from this sector (Schäfer, 2006). These export-oriented subsidiaries, producing for the entire European market, can be characterised as vertically-oriented FDI.



### 3.4.1. Entry modes

Over time the preferences of modes of entry changed significantly, moving from only exports and JV's in the late eighties, early nineties, to the more committing and risky M&A and greenfield investments in the nineties. Furthermore, the discussion of 3.2.2.1 continues, as the OECD (2000), Antalóczy and Sass (2001), Szanyi (2001) and Wes and Lankes (2001) provide insights into M&A and greenfield investments in Hungary and CEE.

Export, as the most common form of internationalisation, has strongly dominated Hungary and has been present since the first market economic characteristics were introduced in the 'Goulash Communism.' At the same time the market opened up towards the West, foreign owned export-based industries started to dominate the Hungarian economy and they do ever since. Nowadays, the Hungarian government attributes much of its competitiveness as an exporting country directly to foreign investment, as these foreign owned companies generate over 80 per cent of Hungary's industrial exports (OECD, 2000).

Joint-ventures were present in Hungary since the end of the eighties, but as the legal system and legislation still evolved, only small scale projects arose. These joint-ventures, involving mostly small and medium-sized firms from neighbouring countries, were based on the existing trade links with Hungarian partners and involved only minor shareholdings in Hungarian private and state-owned companies. The OECD (2000) calculated a steady development of JV's over time, resulting in a presence of 3684 foreign affiliates in Hungary at the end of the nineties.

In the meantime however, more political and economic stability and a working institutional framework resulted in the arrival of other FDI entry modes: M&A and greenfield investment (Szanyi, 2001). Directly after the opening of the market the M&A was the preferred entry mode, as privatization peaked, as it was strongly driven by western multinationals' interest in consumer goods businesses with established markets and brands. The OECD (2000) even concludes that *'throughout the nineties Hungary privatised a bigger share of its economy than any other OECD country'* (OECD, 2000).

The greenfield investments gathered pace from 1995, as they reflected the increasingly stable investment climate. This development is visible in the Investors's Council Survey of 1999, referred to in McKinsey (2000), as foreign investors in Hungary showed that 41 percent of the FDI was invested in greenfield projects and 59 percent in assets obtained through privatization. Furthermore, as in 1999 privatization was more or less completed, the companies that planned future investments mostly chose greenfield investment (McKinsey, 2000). Still, in practice, it is not easy to distinguish between cross-border M&A activities and greenfield FDI, as there are a many grey areas, revolving around M&As conducted through existing operating subsidiaries in the host countries (UNCTAD, 2009).

Sector wise, privatization covered all economic sectors, although it showed a strong increase of foreign capital in the telecommunications, energy and financial services sectors. Greenfield investors are most common in the engineering, food, chemical and the retail sector. Especially the automotive and electronics sector are well-known examples of early greenfield investments in Hungary from global giants Opel/ GM, Suzuki, IBM, Philips and Sony (OECD, 2000)

Future wise, Wes and Lankes (2001) find host countries to prefer greenfield investment over M&A, as a greenfield investment means enlargement of the directly existing supply capacity, the creation of new jobs and an increased competition in the market. As M&As do not have these effects the choice for greenfield investment is a logical one. Were it not, that most investors engaging in M&As do have capital expansion plans, can offer access to technologies



that local firms do not possess and most importantly, that they possess a more developed network of local and regional suppliers. As with a greater amount of linkages the potential for spillovers of FDI also increases, M&As impact on the host economy tends to be larger than in the case of greenfield investment (Wes and Lanker, 2001). On the other hand however, greenfield investments usually induce their traditional suppliers to follow them to their new investment location, thus helping the country to attract more FDI (Antalóczy and Sass, 2001).

Nowadays, there is a preference for M&A, although in time of economic crisis greenfield investments prove more stable (UNCTAD, 2010). The M&A preference fits in the back-to-the-core-activities strategy of the foreign investor, as M&A leads to vertical disintegration, thereby using local suppliers and subcontractors (Atzema *et al.*, 2002). This confirms the findings of Wes and Lanker (2001) that host economies benefit from M&A and therefore should be supported by governments.

### ***3.4.2. FDI location in Hungary***

It has been recognized that the FDI has unevenly spread across Hungary from both a sectoral and geographical point of view (UNCTAD, 2001). Especially more sociologist scholars focus on the fact that the focus on Budapest and the North-Western part of Hungary has created an increase of regional disparities, mostly measured by GDP/capita or unemployment. Fazekas' (2000) analysis of foreign-firm employees (FIE) in the working age population shows that the bulk of FDI has been directed to Budapest and the western border regions. Especially the two central and the two Western border regions were targets of FDI, as they accumulated almost three-quarters of the stock of FDI from 1992-1998.

Towards the end of the nineties a shift in FDI locational choices from West- to East-Hungary has been visible. Two main reasons drove this location shift. First, the low labour costs (the dominant reason of production firms to establish in Hungary) began to rise in the West. And second, the increasing scarcity of skilled labour stimulated foreign investment in hitherto neglected areas as the south and especially the east of Hungary. This resulted in FIE employment to be spreading towards rural regions and regions where there was a well-educated, skilled workforce (Fazekas, 2000).

Still, Barta (2005) shows that “80-85% of FDI is concentrated in the Budapest agglomeration and Northern Transdanubia (Northwest of Budapest) [...] leading to the emergence of structural differences between Budapest and the countryside.” These differences on the one hand result in the dependence of regional development on the countryside on multinational investments, or conversely, their decision to abandon a certain production site. On the other, it shows an increasing importance of the Budapest agglomeration as FDI attracting location, relative to the capital Budapest. Budapest on itself showed a declining economic performance and the lack of proactive economic policies on the part of Budapest's local governments (Barta, 2005).

Other preferred FDI locations are clusters, which in Hungary show much of the same characteristics as the 2<sup>nd</sup> form of clusters, industrial complexes, as defined by Gordon and McCann (2000). The formation of clusters has been visible since the first foreign investors entered Hungary. Back then, there was a strong relation with the Western border of Hungary, as it was close to the Western market. In 2000, the Pannon Automotive Cluster (PANAC) was the first cluster. It was initiated by the Ministry of Economy and involved three major Hungarian-based car manufacturers (Suzuki, GM, Audi) and more than 50 SME's.

Nowadays, clusters are regionally spread across Hungary, concentrated around the larger cities Budapest, Győr, Miskolc, Debrecen, Szeged, Pécs and Székesfehérvár. Also, the increased importance of R&D within various sectors, led to the development of 3<sup>rd</sup> “Social Network” type of clusters (Gordon and McCann, 2000). The MAG (Hungarian Economic Development Centre) today, counts 25 accredited clusters, which shows dominance from healthcare, ICT and Environmental industry. There are about 100 initiatives from different sectors that have taken steps to develop clusters, mostly in the Energy, Machinery, Automotive, ICT, Environmental industry, Business services and Tourism sector. These show the same dominance around the big cities (Novak, 2011).

### ***3.4.3. Hungary’s foreign firm attracting factors (Pull factors)***

What foreign firms led to establish their subsidiary (greenfield) or takeover (brownfield) has been well documented by scholars. There is however, a twofold approach towards these foreign firm establishments, as they were pushed out of Western- Europe and pulled towards Hungary. The first, the need for foreign firms to establish themselves elsewhere, can be traced back towards two firm internal factors. The second, the pull factors from Hungary, can be labelled as Locational-specific factors, as in Dunning (1977, 1988) and Porter (1990). In this thesis the use of the term ‘location (al) factor’ refers to these Locational-specific factors, as they are the pull factors of Hungary (and Budapest), responsible for attracting the foreign investors and their FDI. It hereby sums up the ‘firm external’ and ‘locational’ factors of Lloyd and Dicken (1977)’s model of firm migration factors.

Another important aspect is the in chapter 3.4 mentioned shift from more production (industrial) based investments towards more service sector investments. Together with the economy being fully privatized, the turn of the century landmarks an important change in types of FDI, thereby requiring different sets of pull (location) factors. This asks for a separate approach towards the pre-2000 and post-2000 location factors.

#### ***3.4.3.1. Pre-2000 location factors***

The two main investment push factors are already mentioned in chapter 3.2.2.2 where the internationalization motives are discussed. In Hungary there is a strong resemblance with models from Hakanson (1979) and Vernon (1966), as they show the process of gaining market access and the benefiting from the lower production costs in the newly accessed countries. The first, horizontal investments, to gain market access are generally preferred over the second, more vertical investments of lowering the costs of production factors by foreign firms establishing a branch or production site in Hungary. Both Plokker (1999), analysing the experience of entrepreneurs and Dikova (2005), analysing establishment motives and strategies, show the market factors to dominate cost factors strongly. At least 75% of the establishments were motivated by the market factors (Dikova, 2005).

In their study on a collection of FDI-related studies, Holland *et al* (2000) analyse the motives of the foreign investors in CEE. They suggest a two-way location decision, whereby at first the CEE region has been selected, and at second the decision to establish in a particular country is made. This has consequences for their findings on the FDI motives, as smaller factors as incentives influence the choice of location among similar location within the region.

Holland *et al* (2000) find the factors driving FDI towards Hungary to be the market size and growth potential, with a smaller, yet significant, role for factor costs. Furthermore, they find relative macroeconomic and political stability also playing a major role and the role of attractiveness or skilled labour force is variable. The role of the government is small as incentives, with exception for the two-way model, hardly prove important. Although the

privatizations policies proved of importance, Holland et al. (2000) note that the role of FDI policy in attracting FDI is much smaller than the role of other elements of the economic policy.

For larger multinationals Plokker (1999) finds evidence for Hakanson's spatial development model, as a step-by-step approach is followed by most of the firms. The first step, exporting, is followed by setting up a local presence, which after a while results in the establishment of a joint venture, a takeover or a greenfield investment. For larger service related and supplying firms, the follow-the-customer strategy is dominant, as they follow their big clients towards Hungary to provide the same kind of services as in the home country.

The two investment factors are directly mentioned by a variety of entrepreneurs, as they expect the Eastern European market to grow quickly in the upcoming years, "*thereby being one of the few growth regions in the world,*" and production firms to benefit from the low production factor costs (Plokker, 1999). The OECD (2000) elaborates on the market factor, as multinationals, strategizing from their 'global presence' perspective, view Hungary as potential gateway to other markets of Central and Eastern Europe (CEE), thereby expanding their global sourcing network (OECD, 2000).

The hereby involved location factors are clear, as the push factor motives show the focus on market access and lowering production costs, which Hungary, based on the great amounts of FDI entering the country, offers. However, more location factors play a role, and although various scholars argue over the importance of the factors, they do prove to play a role in attracting foreign firms.

Van Hastenberg (1999) analyses the FDI to Hungary from 1988-1997, which shows the presence of three location factors that made Hungary the main FDI attractor in CEE in that period. All three factors are related to the government and their policies, thereby supporting an institutional location approach. The first, the privatization policy, resulted in direct sales of companies to foreigners, thereby improving the foreign debt. The second, the in chapter 3.3 mentioned introductions of market elements, better known as 'Goulash Communism,' resulted in more developments from FDI and a better perception of potential foreign investors. The third factor is the legislation, which over time developed to be relatively liberal to FDI (Van Hastenberg, 1999).

Szanyi (2003), analysing the FDI from 1990-1998 in Hungary, finds six location factors: Political and economic stability, privatization policy, fiscal and regulatory incentives, geographic location and market access, cheap and qualified labour, sufficiently developed infrastructure.

In his working paper, Szanyi (2003) elaborates on the first 3 location factors, which are directly related to the government creating a favourable investment economy.

The national government applies a generous system of tax holidays and establishes of so-called Industrial Free Trade Zones (IFTZ's), where a special tax climate was created, as no value added tax and duties on the imported equipment had to be paid. These IFTZ's show a strong correlation with foreign greenfield investments, as the majority of industrial greenfield investments are located in the IFTZ's (Antalóczy and Sass, 2001). Furthermore these greenfield investments have encouraged their traditional suppliers to follow them to Hungary, thereby setting up a greenfield company or having established joint ventures in the IFTZ's as well.

This presence of other foreign investors can be labelled as another location factor, as these 'first-round' investing foreign firms prove the investments to be money well spent, in a safe environment, with a positive outlook on the returns of the investment. The same cycle of

supplying firms following the supplied firm, occurs in the service industry, as these service firms also follow their former customers to Hungary.

This agglomeration effect, created by incentives, is best shown by the city of Székesfehérvár, located along the motorway at the southwest of Budapest. Here, an active local government policy resulted in major investments by IBM, Philips and Nokia, as investing companies were exempt from all local taxes between 1990 and 1995 (OECD, 2000). This process shows great similarities with Perroux' growth pole model, as the major firms, with their linkages to the supplying firms, made these suppliers relocate to Székesfehérvár, resulting in strong economic development and growth of the city.

Lastly, another location factor can be found in the good productivity levels, which are strongly influenced by level of education and skill of the workforce (OECD, 2000). Furthermore, Hopka (2010) mentions the legal and tax system to be an important location factor, which together with the liberal trade and investment climate, mentioned by Van Hastenberg (1999) and OECD (2000) sums up the pre-2000 location factors, as given below:

1. Geographical location (market access)
2. Competitive labour and production costs
3. Privatization policy
4. Liberal trade and investment climate
5. Political and economic stability
6. Skilled and qualified labour force
7. Fiscal and regulatory incentives
8. Sufficiently developed infrastructure
9. Labour productivity
10. Legal and tax system
11. Presence of other foreign investors

#### *3.4.3.2. Post-2000 location factors*

In the 1980s and early 1990s, the 'first global shift,' associated with the deindustrialization and the new international division of labour, resulted in the relocation of manufacturing employment to low-cost production locations.

Nowadays, with the sectoral change in FDI, the establishment preferences and motives are changing as well. This 'second global shift' occurred since the Millennium and can be seen as the relocation of service tasks. It involved white-collar jobs, occurred across sectors and nations, required a lower capital investment and is geographically more footloose (Gal, 2009).

Hungary has experienced the consequences of this global shift in two stages of outsourcing, according to Suhajda (2009). The first stage, the outsourcing of service, appeared with the establishment of Shared Service Centres (SSCs) by global companies, attracted by the foreign language knowledge of Hungarians. The second stage brought the arrival of Business Process Outsourcing (BPO) in Hungary. Budapest, based on its highly trained and multilingual labour pool, became a regional centre in the BPO field workforce (Suhajda, 2009).

These stages of outsourcing and the shift towards services in Hungary are strongly linked with two other developments that also occurred since the Millennium. These developments can be seen as part of the heterogeneous group of activities of service functions, thereby also affecting the location preferences of the foreign investors.

The first development is the upgrading of existing assembly and production plants, with higher value added and research and development (R&D) activities, by the industrial sectors, strongly dominated by foreign investors (OECD, 2000). Especially the automotive and electronics industries started to invest heavily in R&D.

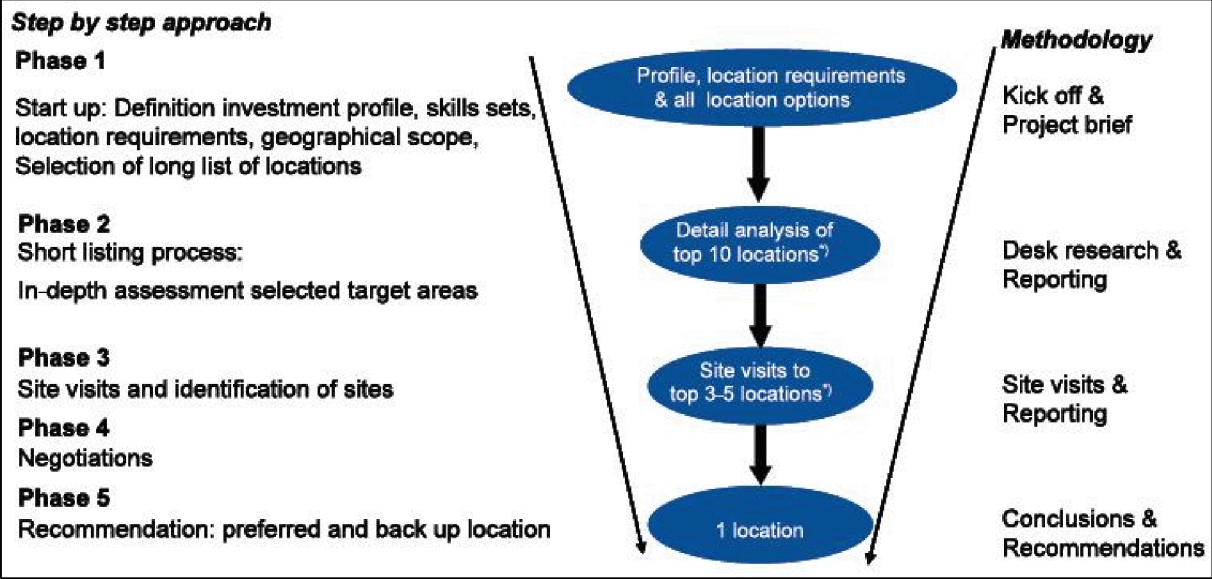
The second change is the focus on innovation as the driver of economic growth and development, both in governmental policies and in investor strategies. This resulted in the growing importance of a qualified labour force instead of labour costs as a location factor and

to the introduction of a strong government policy on innovation, offering great amounts of incentives for R&D related investments.

Furthermore, the completion of the privatization would have led to a money shortage, were it not for the increased reinvestments by existing businesses, the so-called reinvested earnings. FDI analysis by McKinsey (2000) shows reinvestments to become the most important channel for FDI in Central- and Eastern Europe (CEE). This shows that, even though the market is saturating, as “*everybody who wanted to invest, already invested by then* (Czirsfusz, 2010),” and the decreasing role of low wages as key FDI attracting factor, other location factors have to be driving these investments.

A good example of the ‘second global shift investor’ is presented by Buck Consultants International (BCI) (2011) in their model on CEE site selection. Their model, given by figure 3.2, consists of five phases of analysis on the potential location decision by MNE’s. It shows that different locations in multiple countries are regarded and eventually visited, after which the negotiations start and the final location decision is made by the foreign firm. This model supports both Gal (2009)’s definition of the geographically footloose investors investing after the Millennium, and the modern institutional approach, focussing on regions, instead of nations, as the scales decisive in the location decisions of the foreign investors.

**Figure 3.2: The investor’s site selection process**



Source: BCI, 2011

On first sight, the post-2000 location factors do not differ much from the pre-2000 ones. Analysis by Jones Lang LaSalle Hungary (JLL) (2009) and Sass (2008) still show the importance of the location factors low employment costs, infrastructure, geographic location, presence of a qualified workforce and political and economic stability. However, the importance of the location factors did change, as R&D and service activities require other skills than mentioned in the pre-2000 factors. Were it mostly blue-collar jobs, skilled in the ‘lower educated’ jobs, like production and assembly pre-2000, nowadays the skill is related to the higher educated, foreign language speaking graduates.

A.T. Kearney's location index 2004, '*a useful measure and of globalization* (Sagafi-Nejad & Dunning, 2008)' ranks Hungary's capabilities as a successful offshore location to be '*the cultural similarities, attractive costs, good language skills, solid technical capabilities and minimal regulatory problems for European firms* (A.T. Kearney, 2004).'

BCI (2011) also sums up the location fundamentals of Hungary. First there is the European integration, as in integration of regulations, investments in infrastructure and the investment incentive system. Other locational factors are the labour costs, the relatively young and well-educated workforce, the time proximity and the pan-European language and financial skills of the young graduates, with a willingness to work in the support centres as a stepping stone in their career (BCI, 2011).

Sass (2008) provides insights into the different kind of investors in Hungary since the Millennium in her report (2008) on three company case studies: EDS, with activities in ITO, BPO, call centres, financial, accounting and engineering services; SAP, with activities regarding software development; and an anonymous company, with a captive service centre for service provision for local and European production plants.

For EDS, in Hungary since 1991, the important location factors are labour costs, skills and language knowledge (German and "small" European languages), predictable business environment, legal environment and level of harmonisation with other countries to be important locational factors influencing location decisions (Sass, 2008).

For SAP, with an affiliate established in 1991 and a software development centre established in 2005, Hungary proved the best location in the CEE area based upon the previous good experiences of the affiliate, the available workforce, geographical position (Germany) and good level of required infrastructure (Sass, 2008).

The anonymous Shared Service Centre (SSC), established in 2005, chose Hungary over e.g. Spain, Germany, Austria, France, Czech Republic (Brno) and Poland (Warsaw), because of the political stability, infrastructure, geographical position and labour force (skill, language, costs) (Sass, 2008). This shows strong similarities with PWC (2010)'s SSC study, who define the crucial elements of Hungarian SSC success to be the availability of a highly skilled workforce, including foreign language skills, the low cost operating environment and the high standard of local infrastructure (PWC, 2010).

Lastly, the presence of other foreign investors has been mentioned by Shared Service Centres coming to Hungary, as '*it is a safe place to be* (Bunna, 2010).'

Furthermore, the office costs, availability and quality have been mentioned frequently, as the R&D and service functions require a high quality working environment (Sass, 2010). Related to the higher quality work environment are also the quality of life (QOL) factors, also mentioned as location factor (Endrődy, 2010). These are one of the main reasons the office-based foreign firms had a general preference for Budapest, a choice better explained in chapter 3.5.1.

Concluding, it is clear that the educational factor has gained a very important role, as it provides multinationals with graduates, speaking at least two languages and with a level of knowledge that fits in the multinational's business environment. McKinsey (2005) shows that about 50% of the university graduates are well-suited for working for a MNE, which compared to India and China, makes CEE very attractive for higher value added activities.

Summing up the post-2000 location factors results in the following list:

1. Geographical and cultural proximity
2. Good level of (IT-) infrastructure
3. Competitive labour and production costs, low cost operating environment
4. European integration of regulations, incentive system, legal and business environment
5. Political and economic stability
6. Skilled and well-educated labour force
7. Time proximity (to Western Europe)
8. Presence of other foreign investors
9. Foreign language skills (German, “small” European languages)
10. Previous experiences of the affiliate
11. Office availability, quality and costs
12. Quality of life factors

#### **3.4.4. Hungary’s foreign firm rejecting factors (Push factors)**

The factors that make the relocating foreign firms avoid Hungary and move elsewhere, or stay at their current location, are labelled as keep and push factors.

The Investors’ Council Survey of 1999, referred to in McKinsey (2000), showed that half of the fears mentioned by the companies related to government policy. The five government related fears were: a changing legal and regulatory environment; customs duties, excise taxes, and protectionism; inconsistent government policies; local government bureaucracies and potential future political instability (McKinsey, 2000).

The World Bank’s 2009 Business Environment Snapshot for Hungary also shows a top 10 constraints to firm investment in Hungary. The top 5, based upon the percentage of firms indentifying the problem as greatest obstacle for investment, shows 3 out of 5 factors to be related to the government. The top 5 exists of tax rates, political instability, tax administration, practices of the informal sector and corruption (Worldbank, 2009).

This asks for attention to the role of the Hungarian government in the attraction of foreign firms, as “*Good governance helps to attract FDI and bad governance repels it* (Dunning & Lundan, 2008, p. 314).” Hungarian scholars and institutions find evidence for both a positive and negative relation between policy and the foreign firm establishments, thereby supporting the nowadays institutional approach towards firm relocation.

On the negative, Fazekas (2000) states that government and local actors have not enjoyed much success in attracting foreign investment to less desirable, geographically remote regions. Barta (2005) finds evidence for a distinctly positive role of the government up until 2000, but concludes that governmental economic policies after 2000 have not been successful at all levels of governance. The national government policies are aimed at the construction of motorways, as they are expected to attract FDI in the future. Regional policies aim to prioritise the attraction of FDI, but as they lack innovative strategies, fail to achieve this objective. And on the lowest, local scale, positive and negative influences of local economic policies are of marginal importance (Barta, 2005).

A more positive and important governmental role is to be found in the works of Holland *et al.* (2000), who prove the neoclassical incentive system of the government crucial in the decision making of foreign firms in CEE. KPMG Hungary (2004) also finds that the role of the Hungarian government in introducing new “EU compatible” investment incentives, after losing the option to offer tax holidays to major foreign investors, was sufficient.

### **3.5. Concluding statements**

- FDI represents the main tool of internationalisation for medium – and large – sized firms and multinationals
- The Budapest agglomeration and Northern Transdanubia (Northwest of Budapest) saw most FDI inflow
- The Millennium defines two periods of FDI, whereby the sector with the majority of investments changed from industrial to service sector.
- Pre-2000 locational factors are: the geographical location, the labour costs and productivity of a skilled and qualified labour force, production costs, privatization policy, incentives, political and economic stability, infrastructure, liberal trade and investment climate and the tax and legal system
- Post-2000 locational factors are: cultural proximity, well-educated labour force with foreign language skills, good level of IT-infrastructure, integration of European regulations and business environment, time proximity, office and quality of life factors and previous experiences with the affiliates
- Offshore-outsourcing and Captive offshoring are the types of offshoring used in Hungary



## **4) The movement of foreign firms towards Budapest**

### **4.1. Introduction**

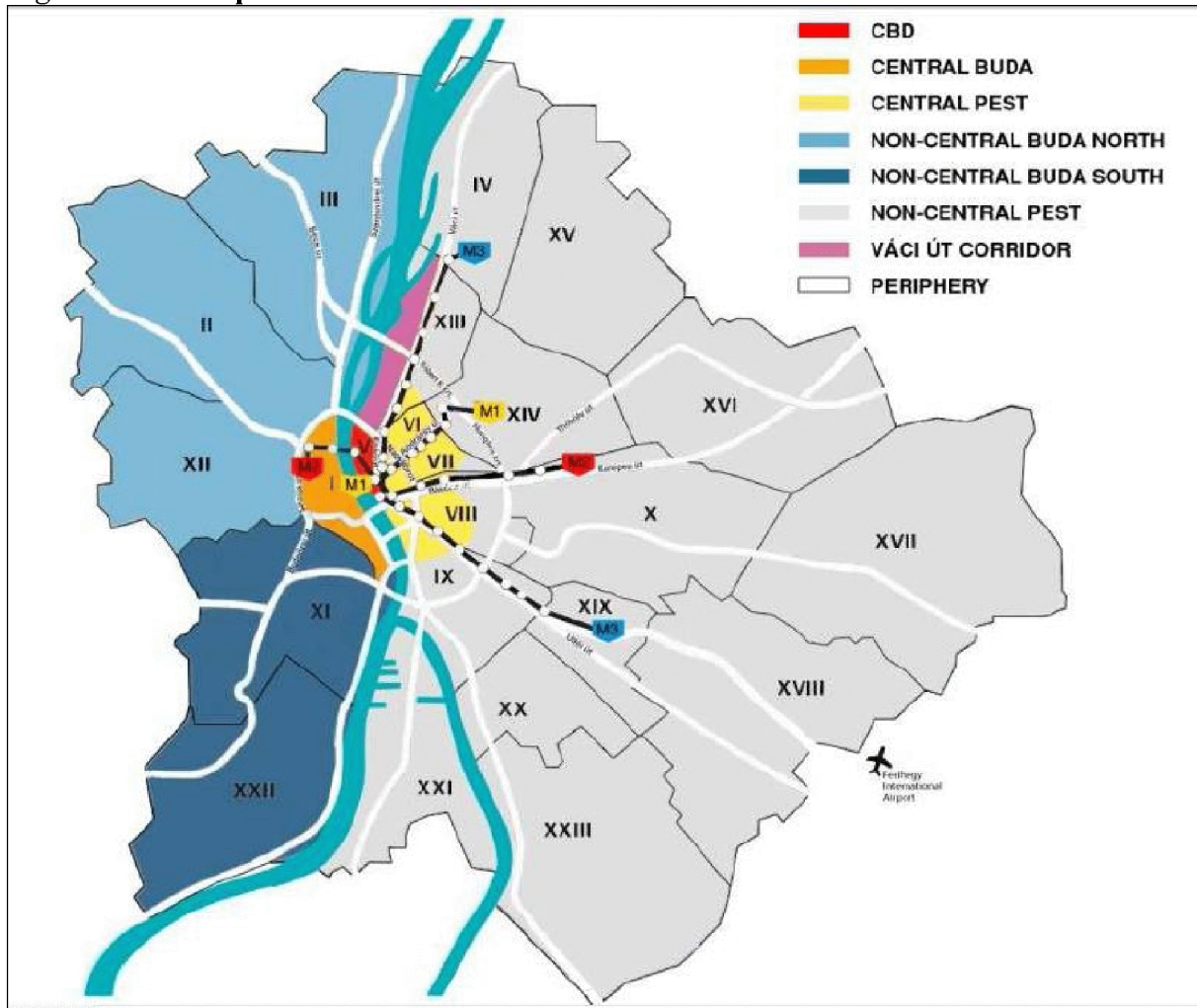
As shown in the previous chapter, the majority of foreign investments focussed on Budapest and its agglomeration. Therefore this chapter shows the historical development of Budapest, as consequences of the Socialist system are still visible. Furthermore, the specific pull factors at the Budapest level are analysed, which shows an increased service sector activity. This asks for a focus on the Budapest office market.

### **4.2. The development of the Budapest market**

Firstly, it is necessary to define Budapest here as the city presented in figure 4.1. It thereby focuses on small Budapest and the inner periphery and ignores the agglomeration and the outer periphery, which together is referred to as the Central Hungarian Region (Tosics, 2006). Figure 4.1 shows Budapest's 23 districts, the Danube, the main roads, the Metro-network, the Ferihegy Airport and the office area classification, widely used by real estate consultants and agencies in their market reports. In 2011, after a number of joint research negotiations by various agencies, the Budapest Research Forum (BRF) now includes all major agencies and delivers quarterly reports on industry, retail, office and investment. The forum (created for office market data collection) includes CB Richard Ellis, Colliers International, Cushman & Wakefield, DTZ, Eston International, GVA Robertson, Jones Lang LaSalle and KingSturge.

Secondly, within Hungary, all cities, previously ruled from a centrally planned system, became subject to market conditions and strong exposure to the global economy (Turnock, 1998). This heavily impacted the city structure and development and changed the more socialist structure of Budapest. As in present times these old structures are still detectable in Budapest's city structure, they influence location choices of foreign firms. Therefore, a historical note has to be made here, which includes the adaptation to the globally influenced environment of today. Tosics (2006) shows the importance of commercial and residential developments and the weak public sector to be heavily defining Budapest's current urban structure.

**Figure 4.1: Budapest and her submarkets**



Source: BRF, 2011

Prior to 1990 Budapest was a carefully planned city (Kovács, 2007), with planning regulations set out as early as 1870 by a Council of Public Works, with an imposing master plan. Hereafter the inflow of foreign capital, already present in small numbers in Budapest before 1990, gained momentum by the liberalization of the economy and the real estate market (Földi & Van Weesep, 2007). This resulted in changing policy, ownership and city structure after 1990, which led the famous urban planner Bertaud (1999) to conclude that Budapest is one of the most loosely built towns among European large cities.

Policy-wise, the Local Government Act of 1990 resulted in a shift in decision-making power from the city to the district, whereby each of Budapest's 23 districts became the main agency of urban development. This political fragmentation led to obstacles for a comprehensive urban development plan, as each district had its own problems of reducing public dwellings and increasing their income through large scale privatization, thereby limiting the willingness to co-operate (Kovács, 2007).

From an institutional approach, Taşan-Kok (2006) shows this political fragmentation to result in a lack of metropolitan planning strategies and implementation power, whereby the upcoming private sector benefited heavily from the power-vacuum in the city of Budapest. It basically meant that private developers could act freely within only the limitations of the property market. Taşan-Kok (2006) states that “*Planning became a corrective mechanism*

*rather than a guideline for development, [as] urban administrations allowed development to go ahead and made the necessary corrections in urban plans afterwards (Taşan-Kok, 2006)."*

This led to opportunistic planning by the private investors, who saw the chance to realize their potential and pursue their goals, resulting in nowadays scattered urban spatial pattern, with large-scale commercial projects at peripheral locations. This was caused by the fact that peripheral districts offered better tax conditions than in the districts with central locations.

One last example of the institutional approach towards urban development can be given by the initiative that the Hungarian state took in the development of the Millennium City Centre (district IX), Millenáris Park (district II) and Infopark (district XI). These developments, as an effort to reinforce the national and international political importance of Budapest by enhancing the city's image (Taşan-Kok, 2006), are strongly represented in the nowadays office areas of chapter 5.

The complete opposite is the development of the entire Váci út, also a major office area, as this commercial axe, extending from the central business district, was initiated and/ or led by private initiatives and is shaped primarily by individual initiatives and by fragmented decisions taken by districts.

Property-wise, the wave of privatization, economic transformation and globalisation had effects on the construction of commercial, office development, mostly in the historical districts. As industrial activities in Budapest dramatically declined, the investors of the new tertiary and quaternary sectors appeared on the scene (Barta *et al.*, 2006). This led to the take-off of the service industry, thereby increasing the demand for business and office space by foreign and newly-established domestic firms. This increasing demand resulted in the physical upgrade and functional change of the city centre, where the current CBD (5<sup>th</sup> district) is established (Kovács, 2007). Almost all plots in the city centre were filled in by real estate developers, with large office and bank buildings built in standardized building envelopes, to minimize risk and construction costs (Tosics, 2006).

In other districts there are more complex stories to be told as nowadays the commercial investments have spread out across Budapest, thereby heavily overlapping the old industrial areas. Tosics (2005; 2006) and Barta *et al.* (2006) provide insights in these old industrial areas, as they study the process of renewing and rehabilitating the so-called brownfield areas, in their research defined as: *'ex-industrial areas that are not used efficiently (underutilised) and are occasionally vacant. Also the mal-utilised or abandoned railway areas and the emptied military barracks fall under this definition (Barta et al., 2006).'*

These premises of former industrial plants, areas previously occupied by military barracks and railway lines have seen a great deal of office and retail development. Together with the smaller scale residential developments, these investments heavily impacted Budapest's urban spatial structure, therefore more details on these developments are provided below.

After the office development in the CBD in the late 1990s, the office boom continued along the major connecting roads (mainly Váci út) and ring roads around the inner part of the city. Here, the higher added value producing services (financial, business consulting, IT, trade and commerce, administrative jobs) gained ground on the former industrial areas, where the industrial functions were replaced without municipal interventions, but exclusively due to market tendencies (Barta *et al.*, 2006).

The retail developments were '*the real novelties* (Tosics, 2006), ' as a boom of the shopping centres and hypermarkets occurred in Budapest since 1994. Over one million square meters of new commercial investments has been built in and around Budapest, of which the good locations near the traffic junctions, metro- and tramlines and at the cross-sections with high transit traffic showed the fastest functional change. The cause of this retail boom can be found in the changed economic environment and consumer habits, but also in the increased amount of expats and the financial sector requiring a certain level of facilities in Budapest (Barta *et al.*, 2006).

These expats were also involved in the residential developments in Budapest. As they worked at corporate headquarters or bank offices in the city centre and preferred to live close to work, they joined other, mostly Spanish, Irish and British foreign investors in buying apartments in the historical neighbourhoods of Budapest (Kovács, 2007). In a later stage, the developing suburban settlements also gained value, as the suburbanizing population increased demand in these areas (Tosics, 2006).

#### **4.3. The locational factors of Budapest**

Sassen (2002) shows the important role of cities in the new global economy, as they are the crucial sites for transactions in financial markets, advanced corporate service firms, banks and headquarters of TNC's. In the light of the increased competition between regions and their cities, instead of the nation level competition, this means that Budapest possesses specific location factors that attract FDI. As analysis of the FDI location in Hungary shows, there already is a clear preference for investors to locate in or in the close surrounding of Budapest.

As the location factors for Hungary also play a major role in the attraction of foreign investors towards Budapest, these are not dealt with here, as they are extensively described in 3.4.3. A closer look at the post-2000 Hungarian location factors however, shows that 7 out of the 12 location factors (resp. 2, 3, 6, 8, 9, 11 and 12) are more or less related to the city of Budapest. The cause of the favourable condition of Budapest within Hungary is the existence of location-specific economies of scale, which are better known as agglomeration economies.

Here, a more theoretical approach is necessary, as most industrial activities tend to be clustered in space and that there is a size distribution of spatial clusters, with different ranges of activities taking place in different clusters, the so-called 'urban hierarchy (McCann, 2002).' Firstly, Marshall (1920), found information spillovers, local non-traded inputs and a local skilled labour pool to be sources of agglomeration. Hoover (1948) classified three types of agglomeration: the internal returns to scale, the economies of localization and the economies of urbanization. More recently Gordon and McCann (2000) (Table 3.1: Industrial clusters) provided a new classification of clusters, but also work of Vernon (1966) and Porter (1990) contain cluster analysis and modelling.

Secondly, central-place theories of Christaller (1933) and later Losch (1954), show that the size and spatial distribution of service, and respectively, industrial functions in an urban centre exhibit a certain pyramidal pattern. These central places consist of a hierarchy, where service and consumer focused firms consciously choose their location and bigger cities consist of more (carrying) functions and a bigger service area (Atzema *et al.*, 2002).

Budapest, as capital of Hungary, is nine times as big as the second largest city in the country, it has all major political, economic, social and cultural centres and it is the centre of the railway, motorway and air traffic system (KPMG, 2010). So, combining theory with practice, it is clear that Budapest is the 'central place' in Hungary, containing the most (carrying)

functions, the biggest service area and thereby providing firms with the necessary agglomeration advantages.

The post-2000 location factors are related with Budapest, as it accounts for 20% of the Hungarian population, hosts the main universities of the country (providing well-educated graduates with good language skills), is the hub of the IT and communication infrastructure, is the centre of the service industry, provides a high quality office environment for good prices and a high level of quality of life factors (JLL Hungary, 2009). Meester and Pellenbarg (2005)'s research on Dutch cities confirm this importance of centrality and existing economic activity as location factor for firms.

Vodafone's establishment of their European Service Centre in Budapest in 2007 is a good example of the SSC/IT/BPO industry choosing Budapest as offshore location for their services. Their main location criteria matched with the post-2000 location factors, as they were the skills and language balance, the ratio of investment, the excellent office premises and the IT & telecom infrastructure (JLL, 2009). Another example is BP, locating their European Shared Service Centre to Budapest in 2009. *'Budapest offers a highly skilled and diverse workforce, with the broad language skills and the technical and customer facing skill sets we are seeking. Furthermore, it has an established and proven service industry track record recognized across Europe* (James, 2009).

Since 2007/2008 however, there have been more reports on the rising wages, it has been more difficult to recruit fresh graduates and an increased car use results in very heavy congestion and smug alerts (Koó, 2010). These agglomeration diseconomies can seriously threaten Budapest as main attractor city for foreign investment, having consequences for office development, but also providing opportunities for secondary sized cities in Hungary (see chapter 7.3).

Still, JLL Hungary (2009)'s report shows the Budapest real estate resources to be excellent and show a good availability, which together with the high vacancies, makes it the more attractive to large occupiers, as they can achieve very competitive conditions and prices (JLL Hungary, 2009). This asks for attention to the office market.

#### **4.4. The focus on the office market**

Strongly related with the city, is the use of office space. As tertiary activity is everywhere recognised as an urban function and with the advanced service industries being the most rapidly growing sector in the tertiary sector this pushes the need for office space (Wheeler *et al.*, 1998). A same conclusion can be found in the "Bedrijventerreinen Syllabus 2009" (Firm Area Syllabus 2009) by Van Dinteren (2009). Translated from Dutch he states that *'within industries there is a stronger focus on service sector activities and together with upcoming economic activities as R&D-centres, ICT-sector and call centres, there is a strong request for office buildings.'* Pen (2002) relates this 'tertiarisation' of the economy in the early 1980s to the office sector becoming a full-fledged research object, thereby leading to a major increase in office location choice studies.

Budapest has seen a rapid deindustrialisation and a tremendous increase in tertiary and quaternary sector investors, making it the main target of the service sector in Hungary (Barta *et al.*, 2006). As chapter 3.4.3 showed, the quality, availability and costs of the offices in Budapest are frequently mentioned as deciding factor for the foreign investor. This is related to development of the office market, which ever since the 1990's saw developers arrive, who progressively created the nowadays modern stock of 3 million m<sup>2</sup> (Eston, 2010). The 'golden

ages' of the Budapest market were between 2003 and 2008 when increasing demand was met by high, new supply levels (JLL, 2011). After which the financial crisis caused oversupply.

The demand by tertiary and quaternary sectors is better described by Evans (1985), referred to in Schiller (2001), as he speaks of multiple office users, thereby allowing the analysis of certain characteristics and location preferences by the different users. Evans (1985) speaks of three types of office users: finance, corporate head offices and business services. This closely relates to the description of Sassen (2002)'s contemporary global economic forces, which settle in cities. These (global) cities are “*strategic sites for the management of the global economy and the production of the most advanced services and financial operations* (Sassen, 2002).”

So theoretically, the financial sector, corporate head offices and the business services, also referred to as FIRE: Finance, Insurance and Real Estate, show a clear preference for the CBD and its close surroundings and can be labelled as the key group of central business district office users. The larger firms however, tend to decentralize the back office functions, leaving a smaller head office behind in the centre and the modern office developments also show a movement out of the city centre (Schiller, 2001). How these developments occurred within Budapest is shown by the office area location map of chapter 5.

#### **4.5. Concluding statements**

- The market development of Budapest has been special, as a combination of weak governance and opportunistic planning gave private investors the chance to realize their potential and pursue their highly speculative goals
- The urban pattern of Budapest is shaped by the decisions of property developers and investors, making it the more interesting to see how this reflects in the office hubs map of chapter 5
- The cause of the favourable condition of Budapest within Hungary is the existence of location-specific economies of scale, which are better known as agglomeration economies
- The Budapest location factors are the well-educated graduates with good language skills, the IT and communication infrastructure, the strong presence of the service industry, a high quality office environment for good prices and a high level of quality of life factors
- The tertiarisation of the economy, resulting in the boom of the service sector, asks for a focus on office-based firms

## 5) The location of foreign office-based firms in Budapest

### 5.1. Introduction

Pellenbarg and Van Steen (1999) state that from an economic geographical viewpoint, the location choice of the firms is one of the most interesting aspects of the inward FDI flows.

As research by Földi and Van Weesep (2007) shows that half of the incoming FDI was invested in Budapest, whereby construction of commercial and office development proved most evident, this asks for an analysis on the locational choices of these investments.

As the foreign office-based firms are spatially dispersed across Budapest, a locational map is created to show the locational preferences of the foreign office-based firms. These so-called office ‘hubs’ show the clustering behaviour of service firms and allow analysis of the chosen locations. Furthermore, a location map of the business service activity in Budapest, based on author’s data collection, is created. These business services have proven to be the most mobile type of services, which makes these services predictors of recent trends on the location choice of office-based firms. These business services are also becoming increasingly important for the economy of Budapest (Nagy and Nagy, 2009).

The explaining of the location choices of these office-based firms is guided by the in 2.8 mentioned firm migration studies, which have resulted in a generally acknowledged list of important pull factors on the local scale (re) location choices of firms. On the local scale, the building factors and the location factors prove most important. But first the actors involved in the relocation process are studied.

### 5.2. Actors involved in the foreign firm establishment process

Chapter 3 has dealt with the firm internal factors, enabling insights in the location dynamics and establishment patterns of the foreign firms (Pen, 2002; Van Steen, 2005). Their actual location choice in Budapest is being determined by locational and external factors, of which the actors involved in the relocation process play an important role.

The environment in which the foreign firms are making their way into the market in Budapest is characterized by the usual three main actors: a governmental representation, a real estate representative and the foreign firm. As simple as this looks, there are multiple levels of governance and multiple real estate actors involved.

The administrative decision-makers at urban government and state levels and the property investors and developers are the two main actors in Budapest. The relationships among them are defined by administrative, financial, and spatial control regulations (Taşan-Kok, 2006).

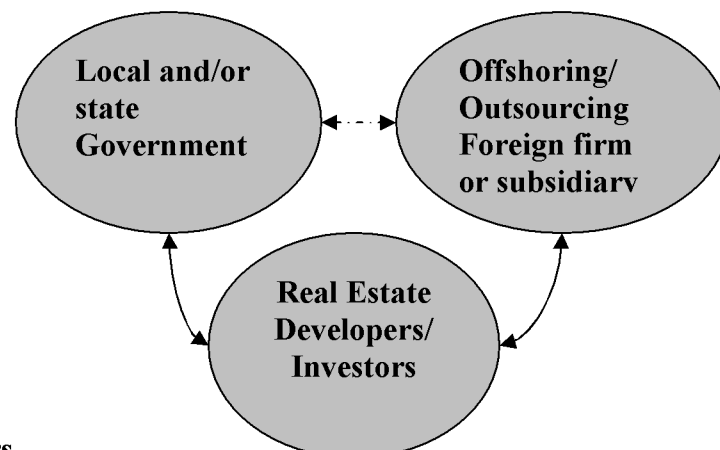


Figure 5.1: The involved actors

Besides these two groups of actors, others who facilitate investment and development are property finance organizations, intermediaries (e.g. dealmakers, real estate agents, and consultants), landowners, end users, property-related services and consultants, architects, and building firms (Taşan-Kok, 2006).

As institutional location behaviour is the result of a firm's negotiations with a variety of local and national players (Mariotti, 2005), the expert interviews provide information on these processes and their consequences for the location decisions of the firms.

One of the actors is the ITD Hungary, the Hungarian government's Investment and Trade Development Agency, to promote foreign investment and bilateral trade (ITDH, 2010a). Their pro-active role in the attraction of foreign capital brought a great deal of success, however, many of the interviewees (Csikós, 2010; Péter, 2010) show the importance of their international agency or consultancy network as more effective in the contact with the foreign firms. As these networks are also located in the home country of the foreign investors, the investor goes to the agency with an assignment of representation or project management, which makes the ITDH more or less redundant. Therefore figure 4.1 shows a dashed line between the foreign investor and the government, as the agency deals with these contacts. Still, Sass (2010) shows that many times a foreign investor does contact the ITDH, as incentives can be involved for the investor, which are dealt with by the ITDH. These incentives however, are very low for the Budapest area, ITDH (2010a) reports that from 2011 onwards Budapest's subsidy intensity ratio will drop to 10%, where most of the business services have offshored/outsourced their service tasks, and are therefore usually of more importance to investments in other parts of Hungary.

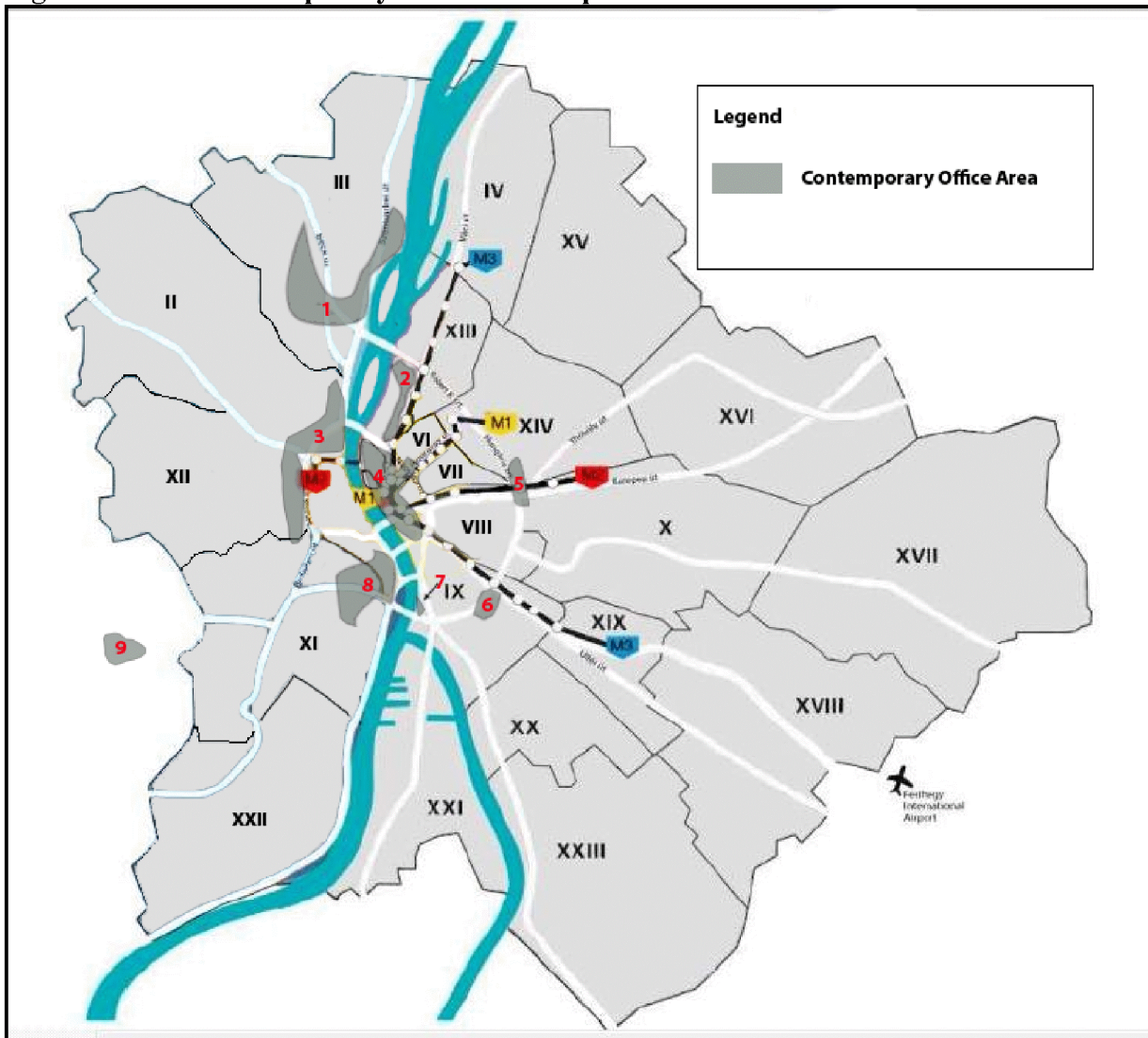
### **5.3. The Office Area map**

Before the creation of the map of foreign office-based firms and their location in Budapest, the link between the foreign firm and the use of the offices has to be established. This relation is established by the fact that foreign office-based companies have high standards of their working environment, therefore demanding a high quality building and attractive locations, as this creates better working conditions. The financial aspects are also supporting these statements, as the multinational companies can also afford these high quality locations, which show high rents and service costs. From the interviews these statements are confirmed as '*International service firms are looking for higher building standards* (Laczkó, 2010),' '*The office sector is the focus of foreign investors* (Péter, 2010)' and '*Over 80% of the tenants are foreign firms* (Koó, 2010).' This knowledge allows analysis on the office market per se, knowing they are the locations of the great share of office-based foreign firms.

Within Budapest there are many office areas, where multiple high quality offices have been built. Figure 5.2 gives an overview of all hubs and their location in Budapest. There is a strong focus on the inner city, where the CBD can be found on the Pest side. Furthermore, another four office areas can be found on Pest and four on the Buda side, which makes a total of 9 offices areas. These are separately dealt with below, with a small history and if possible an example of a recent office delivery or established foreign firm. The overall, more economic geographical explanation on the location of these office hubs is provided in chapter 5.5.



**Figure 5.2: The contemporary office area map**



Source: Author’s creation, based upon CBRE office data from Mr. Borbély, 2010

1) In the Non-Central Budapest north area, where once Obuda (one of the 3 cities that were moulded together to create Budapest from Buda and Pest) was located, lies the first office area. The area is named after the Obuda Gasworks Factory (as it was a Gas Factory) and nowadays hosts the Graphisoft Park. This park, a spin-off from Graphisoft R&D (designing software) is focussed on attracting high value R&D activities, where tenants as SAP and Microsoft enjoy knowledge exchange in a beautiful environment (Hajba, 2010). This project is a perfect example of using the history in current office and location development, which makes it a brownfield investment.

2) In the central Pest area, there is the Váci út corridor, a well known business district. Since the beginning of the 1990’s, the former industrial area has seen a large number of modern office buildings being built. Making it today’s Budapest’s largest business district, offering large amounts of “A” office spaces. The location is very good, as it is close to the CBD, to Nyugati (North) train station and to the WestEnd City mall and conference centre. Accessibility by car and public transport is very good and the most corporate headquarters, Shared Service Centre and Business Processing and IT Outsourcing activities have established here. It is typically a brownfield investment.

3) Partly belonging to the central Buda, the third office area curves around the historical Budapest Castle district, which makes it one of Budapest's most prestigious residential and business districts. It contains some brownfield office spaces, like MOM Park (where the Hungarian Optical Works (MOM) was established, where nowadays Lufthansa and Cisco Europe have located their SSC. Another brownfield investment is the Millenáris Park, a city park built on a former industrial site, where in its near surrounding offices have been built. The remainder of the office area finds similarities with the CBD, as physical upgrade and functional change took place. The area is a mixture of brown and greenfield investments.

4) Office area 4 is labelled as the Central Business District (CBD) of Budapest. It contains mostly banking firms and is the financial and governmental district. The CBD is characterized by one of the lowest vacancy rates and (therefore) highest rents. There have not been any industrial activities and the physical upgrade and functional change of the city centre occurred due to market tendencies (Barta *et al.*, 2006).

5) In non-central Pest, located strategically along the Hungária körút, Budapest's third ring road, an office area arose. The area, represented by the Arena Corner was an empty space and a hole in Budapest, for a long time (Czirfusz, 2010). Nowadays, the area is developing quickly and Vodafone, Citigroup and Cognizant have established their SSC here. It is a greenfield investment.

6) Also in non-central Pest, the sixth office area arose, which only recently has seen some development as Népliget Centre and K3 were built here. Its location, close to a park and the airport has been chosen very well. Historically it was either an empty space or a military area (a military camp was adjacent to it), therefore it can be classified as either both green and brownfield.

7) On the border of Central and non-central Pest, in the area around the Soroksári út, the 7<sup>th</sup> office area can be found. It is best known for the Millennium City Centre (with tenants as Morgan Stanley, Vodafone, Lexmark) and the recent office delivery of Haller Gardens (where BP is the tenant).

The site was the last large vacant parcel of riverfront land in Budapest, as it was reserved for the 1996 World Exposition. Because it never materialized, TriGránit purchased the 5.5 hectare site in 2000 and built a variety of office towers and some residential estates. The government has been actively involved in the development of the site to date, with Hungary's new National Theatre (developed by the Ministry of Culture) that opened on one of the parcels and the Cultural Complex, currently under development by TriGránit and forward purchased by the State. (Laczkó, 2010)

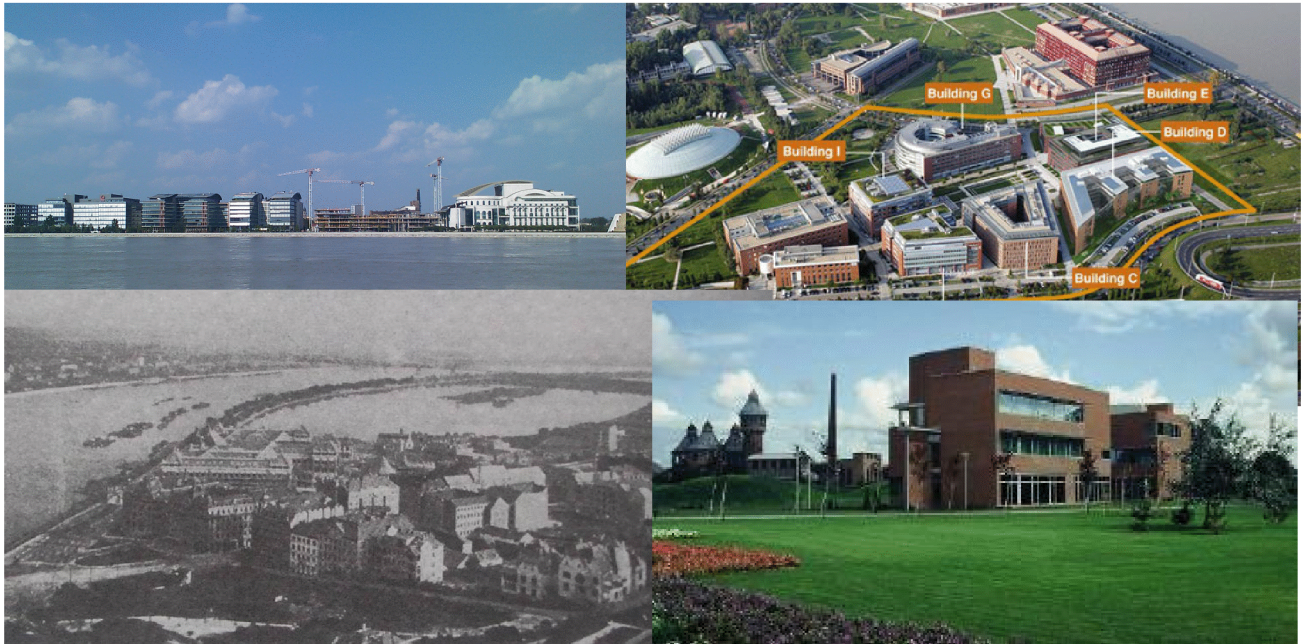
Originally, the Millennium Centre area was a cleared area of the Hungarian Railways, which makes it, by the definitions of Barta *et al.* (2006), a brownfield investment (Szalkai, 2010).

8) On the edge of Central Buda and non-central Buda south lies an office area, with a high amount of R&D tenants. The area consists of the ELTE University, Science Park and Infopark, the first innovation and technology park of Central and Eastern Europe. The innovative environment has attracted the European Institute for Innovation and Technology and a variety of tenants, ranging from TATA, Ericsson and Satyam to Lufthansa Systems and the NKTH (National Office for Research and Technology).

The area is more a greenfield investment, as it was an unused area until the mid-1990s. Even further back, estimating the 1960s, the area looked like the old picture in Figure 4.3.

9) Just outside of the municipal borders of Budapest, in the Pest country, lies the city Budaörs. It is part of the Budapest agglomeration and contains a small amount of offices, as it's mainly functions as logistic centre (Plokker, 1999). It is mostly known for the presence of General Motors, which was an office building of an industrial company and was refurbished after the system change. Some parts of Budaörs, mostly south of the railroad, are brownfield investments (Czirfusz, 2010). Author's SSC/BPO research shows the presence of BAT's financial centre and Roche's Service Centre.

**Figure 5.3: Collage of office area 7, 8, again 8 and 1**



Sources: author's photo's, [www.infopark.hu](http://www.infopark.hu), ELTE Institute of Geography and Earth Sciences, [www.graphisoftpark.com](http://www.graphisoftpark.com)

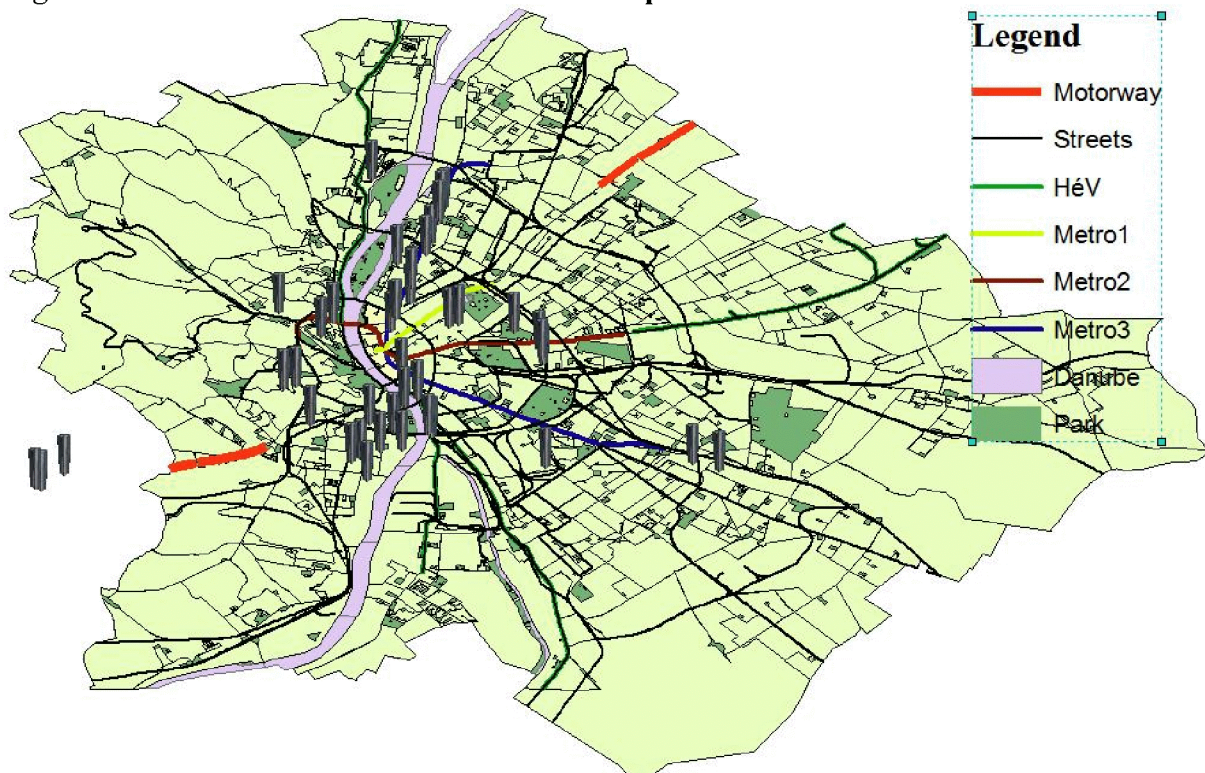


#### 5.4. The business service map of Budapest

As business services are by far the most mobile sector (Pellenbarg, 2005; Van Steen, 2005), responding most quickly to contemporary market changes, these services show the (re) location trends in the Budapest office market.

The services and activities labelled as business services in this thesis, as by the definition also used in Sass (2010), are the Shared Service Centres and the Business Process and IT Outsourcing activities. These three services and activities represent the majority of the heterogeneous group of outsourced/ offshored activities in Budapest. The data is collected from a variety of sources, as Appendix D shows, and is used to compile figure 5.4, which shows these business service activities in Budapest.

**Figure 5.4: The business service sector in Budapest**



Source: Author's data collection, Appendix D, P. Baji for GIS-data

There is a strong overlap with the office areas of figure 5.2, with the exception of the spreading out of business services across Budapest. This centrifugal trend of the business services is used in the future developments of chapter 6.3.3, where further analysis of this map takes place.

The three business services outside of Budapest, General Motors, BAT and Roche, are located in Budaörs and are implemented in this map as for practical matters the future map (7.3) does not differentiate between Budapest and Budaörs.

## **5.5. Explaining the Office Hub locations**

As stated by Louw (1996), the majority of researchers on firm relocation in the office sector apply two groups of factors, decisive to the location choice: the building factors and the location factors. Meester and Pellenbarg (1986) also conclude that on the local scale the building and environment (surrounding) factors are of most importance for the establishment location.

There is also a third factor involved: the financial/ contractual factor. This factor, playing a role when users of the office building tend to rent, increases the importance of the property developers and investors. These developers and investors are the accommodators of office space, who in the work of Louw (1996), influence office location decisions, as the office supply limits the choices of future tenants.

This thesis however, focuses on the demand side of the market. This relates to the behaviourally orientated firm migration studies, whereby the firm is the object of study. The pull factors, attracting the foreign office-based firms to a certain location, are already mentioned in chapter 2.8 of the theoretical framework. The migration studies show four different types of factors: image and quality, the accessibility, the institutional and the 'hard' agglomeration factors.

Furthermore, it is important to recognise that the sectoral preferences for location factors differentiate. Therefore, as the target groups within these office areas are mostly business services, banking and corporate headquarters, this thesis uses the (business) service sector related location factors of table 2.3 and 2.4 as frame of reference.

Although these pull factors are recognised to apply in more countries than just the Netherlands, a confirmation of these factors is gathered by the interviews. The interviewees mentioned quite similar location factors as in both locational factor tables. Especially the public transport and expansion possibilities (or shrinkage of office space in bad economic times) were mentioned often.

The four types of location factors used in the firm migration studies are also applied in this thesis, as they provide insight in the interrelatedness of the location factors in the two tables. This allows the grouping of certain location factors, into four groups of interrelated location factors.

The first group, image and quality factors, contains the prestigious building/site/location, premises and the quality of the landscape factors.

The second group, accessibility factors, contains parking, road and public transport accessibility and the telecom facility factors.

The third group, the institutional factors, contains the government's positive attitude and the labour force related factors sufficient high skilled workforce and labour mentality.

The fourth group, the 'hard' agglomeration factors, contains the proximity of clients and suppliers, the market location, the expansion possibilities and the land rent price ratio factors.

### **5.5.1. Image and quality location factors**

The prestigious building, site, (premises) and location and the quality of the landscape factors have seen an increase in importance over the years (Pen, 2002), making them top of the list in two of the three location factor lists of table 2.3 and 2.4.

Nowadays these factors show in Budapest, as the Danube and a variety of parks provide the necessary quality environment for developers, feeling the needs of the tenants, willing to pay more if these criteria are met (Weterings *et al.*, 2009). Pintér (2009), commenting on the fact

that banks and larger sized companies recently started to move towards the city limits, relates this to the green environment, as it provides better working conditions.

These prestigious location factors are also closely related to the higher value added and R&D activities, which shows in the green surroundings of science parks as Graphisoft Park and InfoPark. These two Budapest Science Parks are known for their innovative characteristics, InfoPark saw the European Institute for Innovation and Technology locate their office on the park and Graphisoft Park developed the Acquincum Institute of Technology, a private university, which opened its doors to enable better R&D cooperation and education.

The higher value added activities, demanding a high quality working environment, have shown an increased interest in the green building. The Skanska Office Index 2011 showed an increasing number of companies stating that they place a high priority on environmental aspects when choosing office premises (Skanska, 2011). These green buildings, rated with LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) certificates, represented a big share of the recent office building deliveries.

Two examples of these deliveries are the Népliget centre, delivered in 2008, and the K3 building, delivered in 2010. Both are located close to the Népliget Park, with amenities as shopping centres, restaurants and an international bus station nearby. Furthermore, the site is landscaped with vegetation and the car parking has been incorporated underground. The Népliget Centre saw a great activity among tenants in the recent years, as Ericsson, Activas and Papyrus moved in. Ericsson stated that it is a *'workplace of outstanding quality for close to 500 people from a business, human and environmental aspect (Nepligetcenter.hu, 2010)'* The K3 building was entirely bought by insurance company Allianz, as *'Allianz has continued its journey on the "green road" towards being a modern, innovative and environmentally conscious company (WING, 2010).'*

Future developments also show the environmental awareness, as the Green House development in the 13<sup>th</sup> district, one of the very few developments that continued construction during the crisis, received the platinum (highest) LEED status.

### **5.5.2. Accessibility factors**

Top of the list is the parking factor, showing the importance of parking space and explaining the major car garages that are constructed under the delivered buildings. A closer look on the websites from some well-known office buildings or parks ([www.infopark.hu](http://www.infopark.hu), [www.officegarden.hu](http://www.officegarden.hu) and [www.millenniumtowers.hu](http://www.millenniumtowers.hu)) shows the importance of accessibility, as the road and public transport options are extensively worked out in the location section of the website. But the websites also clearly show the massive, mostly underground, parking options as an important service for the future tenants. This strongly relates to the major increase in car use over the last couple of years.

This increase in the individual motorization rate is a parallel process of the increased suburbanization around Budapest (Tosics, 2006). Together with the increased income per capita, allowing people to afford a car, these developments lead to a change in transportation patterns in Budapest. Tosics (2006) shows a change in modal split, from 85-15 in the 1980s, with a clear domination of public transport, to a modal split of about 60- 40 nowadays.

Congestion however, is the major threat to accessibility, as the frequency and intensity of traffic jams in the periphery and the inner city areas are increasing and capacity on connecting and inner city roads is limited. This supports the movement of office-based firms towards the city limits and agglomeration, which according to De Boer *et al.* (2002) is not only related to car accessibility, but also to the parking and expansion possibilities. Pintér (2009) and Péter (2010) speak of a similar development in Budapest in the recent years, as the tendency of tenants moving out from downtown will continue, thereby creating demand for modern office developments on the edge of the city, with a high level of service provision at considerably lower costs. Recent examples of these movements from downtown are the banking sector, normally looking for downtown facilities with good transportation features, and large size firms for which downtown is becoming unaffordable, especially with a large car fleet. Both sectors show a change in preference towards the green environments of the non-central submarkets (Pintér, 2010). The possibility to move offices in the first place is created by the developments in the IT infrastructure and telephone sector, thereby allowing a network economy that makes outsourcing and offshoring possible. Also on the local scale the availability of internet, telephone lines and other IT infrastructure related activities determine where possible office location, e.g. by Haller Gardens' location closely to the fibre network lines (Koó, 2010). Nowadays however, the availability of the high quality of IT infrastructure has spread across Budapest, thereby leaving locational choices of the office-based firm to be determined by other location factors.

These congestion developments ask for an improvement of the public transport system, which since the socialist times has proven its importance to commuters in Budapest and its agglomeration. Improvement however, is costly and takes a great amount of time, especially with recent trouble of debts of the state-owned railway company (MÁV) and the Budapest public transport company (BKV) (BBJ, 2011f). Tosics (2006) sees more troubles in public transport, referring to the '*fewer households that find the living circumstances outside Budapest to be superior enough to counterbalance the pains of commuting*' (Tosics, 2006).'

Still, the public transport's role remains of major importance (Hopka, 2010). Laczkó (2010) estimates the public transport use of the workforce at 80% and points out the importance of biking, which is related to the green image creation of the companies.

JLL Hungary (2009) also finds a high proportion of the population to commute daily to the capital CBD and main office areas, thanks to an excellent public transport network.

They estimate the maximum commuting time in Budapest at 60 minutes, thereby reaching the most parts of the capital within this time (JLL Hungary, 2009).

The author of this thesis, together with G. Szalkai (2010), created three different accessibility maps to increase understanding of the public transport network for office-based firm locational choices. Also, it allows visualising the commuting time.

These maps are based on calculations on the BKV database, made possible by Mr. Gelencsér. Its method is a calculation from 1 point (Nyugati Station, Haller Gardens and Árpád hid), towards 1928 points in the Budapest area, thereby calculating the transport time necessary to reach it (Szalkai, 2010). A fourth location map, showing the public network, with exception of the bus network, provides the visualization of the isodapanes that indicate the time travelled for to reach the references points.

Results, shown in Appendix E, point to the great public transport access of Nyugati Station, followed by the Árpád hid (Váci út) and the lesser accessible Haller Gardens (Soroksári út). These results point to the strong locational preference of business services for Nyugati Station and Váci út, where recent developments Eiffel Square (delivered in March 2010) and Capital

Square (delivered in June 2009) have seen a great deal of interest, with respectively 90% and 70%+ occupation rates (Irodahaz.info, 2011a; 2011b).

Together with the excellent accessibility by car, whereby most of the commuters are moving towards the 2<sup>nd</sup> and 3<sup>rd</sup> more luxury residential districts (Borbély, 2010), this explains the success of the Váci út Corridor. This former industrial area which started only to become a preferred location 10 years ago has become the largest sub-market for quite some years now (DTZ, 2011b).

Overall, the office areas strongly connected to the road and public transport network are area 2- 8 and to a lesser extent area 1 and lastly office area 9. Areas 2, 3, 4, 5 and 6 have a direct connection with the metro network, which proves the fastest way of transportation. Area 1 is best accessible by car and the HEV (Suburban train) towards Szentendre, area 7 and 8 are connected to the metro network by the tram network that will take only a few minutes to reach. However, area 8 will benefit greatly from the Metro 4 development that after many struggles will see its opening somewhere in 2015. Area 9 is best reached by car and by train. The GIS data showing the bus lines was too complex to show in the accessibility map of Appendix E. Still, from this data it was clear that the bus lines reach every office area, with a dense network on the Buda side and an increasing amount of bus lines outside of the inner city districts (V, VI, VII, VIII and IX) on the Pest side.

Hajba (2010) points out that most employees working at Graphisoft Park, part of office area 1, own a car, therefore the public transport, which is possible by taking the HEV and a 10 minute walk, is of less importance to their location. Their approach is strongly related with the image related location factors, as they provide a high quality R&D environment on the beautiful banks of the Danube, as picture 5.3 shows.

### **5.5.3. Institutional factors**

On the local scale, the government's attitude and the labour force related factors sufficient high skilled workforce and labour mentality are of less importance for the local location choice. Still, as districts have a strong decision making power, incentives can differ between them. On the other hand, the competition for workforce has also been mentioned by Mr. Koó (2010), as BP located in the 9<sup>th</sup> 'upcoming business' district, instead of the Váci út, as Exxon Mobil was located there. There is however, an increasingly important role for the municipality in decision making on the Budapest level. This decreases the importance of institutional factors among the local scale locational factors.

### **5.5.4. The 'hard' agglomeration factors**

Regarding a specific location in Budapest per se, it shows that the direct surrounding of a location, the location itself and the premises are directly related to the price of the leased office space (Weterings *et al.*, 2009). This shows that the location (per se) in the market is also of importance to the locational choice of the foreign office-based firm. Furthermore, De Boer *et al.* (2002) show the attractiveness of the building and the options to expand to play an important role among the locational factors.

As office-based firms tend to cluster in space, this also creates a higher value added to the building, which plays a role in the developers decision to build multiple office buildings on one site. This is visible in Hungary, e.g. The Millennium Centre with 4 office developments, the Népliget Centre with 2 office developments and the Office Garden, developing 5 office buildings.

The land rent ratio basically reflects in the supply, demand and availability (vacancy ratios) of the office buildings in the particular sectors of the Budapest office market. Overall, the vacancy rates for 'A' type buildings are approaching the 24-25% levels (Eston, 2010). When



looking over the submarkets, the CBD stands out, with rents of € 14-22 per month/per m<sup>2</sup>, followed closely by Váci út, central Buda and central Pest, with rents varying between € 11 and € 16,5 per month/m<sup>2</sup>. The non-central pest submarkets averages € 10-13 per month/m<sup>2</sup>, the non-central Buda north averages € 10-14 per month/m<sup>2</sup> and the periphery shows € 8-12 per month/m<sup>2</sup> rents. All submarkets saw their rents lower from 2009 to 2010, with the exception of the non-central Buda north submarket, which showed an average rent of € 10,5-14 per month/m<sup>2</sup>, a slight increase in rents (CBRE, 2011). This relates to the popularity of the 11th district among tenants, which is further explained in chapter 6.3.

The expansion possibilities, or in economic bad time the shrinkage possibilities, of the service tasks outsourced or offshored by the foreign firms also play an important role in the location decision. As these tenants prefer to be flexible, able to respond to the economic up- and downturns very quickly, they prefer a lease contract with their landlords, whereby these kinds of arrangements are possible. When BP moved into Haller Gardens, a stepwise approach was used, as week after week the number of employees rose and the office area that was used increased.

## 5.6. Concluding statements

- The building and location factors are the most important locational factors for a firm's location choice in Budapest
- The most important locational (pull) factors in Budapest, most strongly influencing the location decisions of foreign office-based firms, are the accessibility, both by car and public transport, and the image and quality location factors
- These two groups of locational factors show their influence, as foreign office-based firms are more frequently choosing locations away from downtown, but well connected to the public transport and road networks
- The business services, as most mobile type of service activity, already show this outward moving trend
- With the movement towards the city edges, the possibility to expand also increases
- The proximity of other service sector firms, as locational factor is also visible in both the office area and business service map

## 6) Factors changing the locational pattern of the near future

### 6.1. Introduction

As no local or regional process is nowadays untouched directly or indirectly by globalization, the macroeconomic development of the world, Europe and Hungary will have its impact on the Budapest market. The micro economic developments, public transport, the office development and municipality's development programmes, will also change the future pattern of office-based firms.

Furthermore it is important to focus on the strong economic sectors that have seen strong development in the past years, but are also expected to keep their role as major investors in the Hungarian economy for the next decades. These 6 sectors are of major importance for the Hungarian economy, but special attention is given to the business service sector, which is seeing major development of Shared Service Centres (SSCs), Business Process Outsourcing (BPO) and Information Technology Outsourcing (ITO) over the recent years.

### 6.2. Macro-economic developments

Although for the changing location pattern of foreign firms in Budapest the micro-economic factors are more interesting, a short vision on the macro-economic factors is necessary. These factors are, as explained in Atzema et al. (2002), very important for the location decision on an international scale, as they determine whether a firm enters a particular country or not.

#### *Overall economic development*

Hungary suffered greatly from the economic crisis, resulting in the financial aid from the IMF and the EU in 2008. In the last three years the recovery has been slower and the government had and still has to cut strongly into their budget. The economic growth that is expected by the government, meaning increased exports and on a smaller scale an increased demand on the domestic market, is strongly dependent on the global economy. The Hungarian government has made strong economic restructuring, according to the '*Széll Kálmán plan*' the government aims at a 3% GDP growth, which according to Portfolio.hu (2011) '*is almost impossible to reach.*'

#### *Globalisation*

In their writings, McCann & Acs (2009) are analysing the current and future economic prospects of the world economy, there by analysing globalization and its impact. Overall, there is one clear aspect that seems to drive the economic growth: the need for face-to-face contact in business making, thereby demanding daily trip distances for managers when visiting and holding meetings. This points at the importance of airport within the global economy.

This globalisation idea has consequences for the future perspectives of Hungary, with Ferihegy Airport being Hungary's largest and most important airport, the attention towards growth and accessibility of the airport should be increased.

It is clear that in Hungary, the Ferihegy Airport already is being used for these daily trip business meetings, as BBJ (2011i) shows London, with 80,000 passengers, trailed by Paris, Frankfurt and Amsterdam to be the major destinations of the flights. Not surprisingly these are the major international business and finance centres (Sassen, 2002).

#### *Dual economy*

Another side of the focus of FDI and TNC's on the Budapest agglomeration was the fear of a dual economy, which especially in the 1990s led to an enclave status of the foreign companies.

The Hungarian population viewed companies in foreign ownership negatively as they hardly interacted with domestic ownership. With changing world wide views on TNC's by the turn of the century, improved forms of co-operation between foreign and domestic companies and the spatial movement of FDI also arose in Hungary (Barta, 2005).

The core problem of the Hungarian SMEs in the ICT sector is that they can hardly suit the requirements of the strong international competition. The production and service providing culture of SMEs are mainly not competitive and efficient. This can be attributed to the lack of standards, appropriate technologies and to the underdeveloped knowledge (e.g. cooperation) that are necessary to produce high quality products and services.

### *Rural development*

Positive development within the national investment policy was the use of investment related measures. These contain stimulus packages and/or state aid or general taxation measures (UNCTAD, 2010). The ITDH uses these stimulus packages to attract foreign firms, but more important, to locate the foreign firm in a less developed place, preferably outside Budapest, depending on the type of company. The less developed the region, the higher the compensation and the higher the tax reduction. In this way they attempt to stop the contemporary process of increasing differences between core and periphery in Europe (Szabó, 2010).

### *Education*

It is clear that the educational factor has gained a very important role in attraction firms towards Hungary, as it provides multinationals with graduates, speaking at least two languages and with a level of knowledge that fits in the multinational's business environment (McKinsey, 2005).

Hungary has 19 State Universities, 7 non State Universities, 10 State Colleges and 34 Non state colleges, thereby having around 430,000 students (ITDH, 2009b). For the future however, a transformation of the educational system with a more long term vision is necessary, as Hungary wants to ensure its competitive human resources (HEBC, 2010).

Very recently, the government has approved a plan to meet the needs of the labour market, by shortening vocational training programs to three years and place a greater emphasis on practical instruction (MTI, 2011). Endrődy (2010) emphasizes the importance of education and languages, as secondary schools and faculties in the countryside should start Shared Service Centre and language training.

### *Labour force*

A rather stable factor that influences the decision of firms to move or not, is the availability of the skilled working force. The process of globalization leads to an increasing amount of people, especially the ones with a relatively good education, who are very mobile on the globalized labour market. Within this process, the Hungarians remain very homeland based. Hungarians do not intend to work abroad even if they lost their job at their actual residence, which results in being one of the least mobile nations in the EU (Eurobarometer, 2005).

Still, the high non-active part of the population, which saw an even bigger increase since global 2008 crisis, is problematic for Hungary. It is costing too much public expenditure, child support is too high (Endrődy, 2010) and the large personal taxes will also keep Hungarians working in black economy, as half of their 'white' earning will go to taxes. For future growth and competitiveness the corruption and the black and grey economy should be fought and the SME sector should be strengthened (HEBC, 2010).

For the future of the labour pool, it is useful to analyse the population development over time.

### *Ageing*

As the workforce has been mentioned in a lot in reports, expert interviews and previous research, it is important to look at the population development of Hungary.

Hungary's population has been declining and without any major migration flows inwards, there is a certainty that the future population will keep shrinking (TARKI ESS, 2005).

Analyzing the population composition between 2006 and 2050 shows the effect on the potential working age population (15-64) is very large, with a decrease of 25%. The old-age (65+) group will increase rapidly (28% of the population in 2050) and the young age group (0-15) will show a small decrease. The old-age dependency ratio (population aged 65+ divided by population aged 15-65) is projected to rise from 23 % in 2004 to 48 % in 2050, close to the EU average (Stanowsky, J., 2007).

More importantly, especially Budapest is steadily losing residents due to more deaths than births, in combination with suburbanisation processes. This results in more congestion, but more importantly this results in the decline of the most vital and active age groups, which is a threat to a city's economic strength (ECOTEC, 2007).

These population developments will lead to long-term budgetary impacts on Hungary's pensions and financial balance and to a significant increase in pension expenditure as a share of GDP over the long term, which brings a big risk to sustainable public finances (EU Commission, 2006). Endrődy (2010) also shows the need for rethinking policy on ageing and allowances, as especially the poor, Roma people live on these child allowances, which are far too high in the first place. These policy related problems are also dealt with by the fiscal policy below.

### *Fiscal policy*

The importance of a stable fiscal balance, which means a stable economic country, has been frequently mentioned by multinationals entering Hungary over time. Therefore, the most important recent fiscal policy changes are to be mentioned here, starting with Hungary's late 2008 request for financial help from the IMF and the EU. After almost a decade of persistent, high fiscal deficits and the building up of external imbalances, the financial turmoil forced Hungary to take these measures (OECD, 2011). This can be regarded as a blow for Hungary's stable image.

In 2009 however the image improved. With the financial support, Hungary belonged to the group of countries where the sustainability risk, or "*the ability of a government to assume the financial burden of its debt in the future*" (EU Commission, 2009)." was medium. This meant an improvement regarding 2006's high sustainability risk classification.

Nowadays, the consolidation of the government's budget deficit has attracted attention in the media, as both Hungarian and European sources argue over the "*Széll Kálmán plan*." Within the time span of 2011-2014 this plan should bring Hungary's 2012 fiscal deficit within 3% of the GDP, as required by the EU. It will introduce structural measures on the expenditure side, including social and pension expenditures, but also savings in local government and the transport sector (Comm. for EFA, 2011).

Furthermore, it includes so called "crisis taxes," whereby strongly foreign dominated sectors banking, retail, energy and telecom sectors are temporarily charged extra to help Hungary over the crisis situation. These taxes led to very negative responses by managers in the charged sectors, but no direct consequences are to be found yet.

These crisis taxes are frequently mentioned when discussing the last important macro-economic development: competition.

### *Competition*

Competition occurs both within Hungary, as regions and cities try to offer the most attractive deal for foreign investors and outside Hungary, as other Visegrad 4 (Czech Republic, Poland and Slovakia) countries and Romania are strong competitors striving for the FDI in various sectors. MNE's are carefully weighing the locational factors of the Eastern European area, which makes it hard to find what kind of competitive advantage Budapest, or Hungary as a whole have to offer. Hopka (2010) also finds support for this lack of competitive advantage by the fact that SSC, BPO and ITO projects occurring in Hungary, are 9 out of 10 times also occurring in the surrounding countries.

## **6.3. Micro-economic developments**

As the factors mentioned above have their impact on the Budapest scale developments, there are also more local factors involved, which also have their impact on the office market. These are to be found in the development of the public transport, road network, the office development and in an analysis of future local policy by the municipality.

### **6.3.1. Public Transport**

Two developments of the public transport are to take place within a couple of years, thereby changing the accessibility status for certain locations, a change, anticipated for by the developers.

The first development is the 4<sup>th</sup> metro line, on the drawing board since the 1970s, construction starting after the Millennium and the operations should start in 2015 (BBJ, 2011c). For a clearer picture of the location of this 4<sup>th</sup> metro line within Budapest, figure 7.1 shows the location of this new metro in the rectangle, where Figure 6.1 can be placed.

The initial plans however, where to develop an even longer metro 4 line, up until Bosnyák tér and not to Keleti Train Station as it will be now. Recently it was announced that there will not be a 2<sup>nd</sup> section of the metro line.

**Figure 6.1: The Metro 4 trajectory**



Source: [www.sztaki.hu](http://www.sztaki.hu), visited 22-04-2010

The second development will be the extension from tram line 1, which currently runs from Bécsi út to Lágymányosi hid (bridge) over the 3<sup>rd</sup> ring road of Budapest (BBJ, 2011b). The plan is to extend the number 1 line over the Danube, from Lágymányosi hid to Fehérvári út. This will increase the accessibility of the 11<sup>th</sup> district in a great way, as also the 4<sup>th</sup> metro lines runs along the 11<sup>th</sup> district. The biggest development in the area, the Office Gardens I and II,

with three more stages coming up, will benefit greatly from these improvements, as these developments were anticipated for, as their website mentioned the tram extension on their website in early 2010 already ([www.hallergardens.hu](http://www.hallergardens.hu), visited 22-03-2010). This shows the plans were already there, but the metro 4 project was given priority, and therefore all the available resources. In the BBJ (2011a) however, the resources for tram and trolley bus developments were announced to be available.

### ***6.3.2. Road infrastructure and congestion***

Two developments will take place, the first the construction of the highway, and the second, the introduction of a congestion tax.

The first development will be the construction of a new bridge across the Danube, thereby crossing over the Csepel Island and connection the Galvani utca on the Buda side and the Illatos út on the Pest side (Borbély, 2010). The plan is included in the Medium Term Urban Development Program of Budapest, the Podmaniczky Plan. It is closely related and referred to by the DunaCity project ([www.dunacity.hu](http://www.dunacity.hu)), which started the infrastructure construction in 2007, wanting to create a new city-in-city concept in Budapest. Their plans for skyscrapers however, are not accepted by the Budapest municipality, as they have building regulations on building heights. The project itself however, is more likely to finish in the 2025 area due to the financial crisis and has therefore been put to a hold.

The second development is the introduction of congestion charges. By the time the Metro 4 line starts operation in 2015, Budapest has to impose congestion charge on cars driven in the city centre, as this is laid down in the European Union's conditions of financing Budapest Metro 4 project (BBJ, 2011b). As the fee is planned to generate an extra HUF 13 billion for Budapest, the introduction might be introduced in the late 2013 or early 2014 already.

### ***6.3.3. Trends in office development***

To gain insight in the future office market development, the recent market dynamics and potential trends are noted below. These trends are also used for the creation of the future office area map and are related to the business services map of chapter 7.

The first trend is the movement of office-based firms away from downtown and towards the edge of the city, as has been reported by both Pintér (2009) and Péter (2010). They speak of a similar development in Budapest in the recent years, as the tendency of tenants moving out from downtown will continue, thereby creating demand for modern office developments on the edge of the city, with a high level of service provision at considerably lower costs. Recent examples of these movements from downtown are the banking sector, normally looking for downtown facilities with good transportation features, and large size firms for which downtown is becoming unaffordable, especially with a large car fleet (Pintér, 2009).

The interviews with Endrődy (2010) and Péter (2010) showed a second trend, the quick movement of the foreign firms when entering Hungary, thereby presenting opportunities, even during the crisis years. These opportunities are related to the speculative building, as foreign firms want to relocate as quickly as possible, but where it would normally would take at least 2 years from the start to the finish of a development, leaving out all the bureaucratic problems (Endrődy, 2010). The projects put on hold by the crisis are an answer to the need for quick relocation, as the time to finish these projects is remarkably shorter than the creation of a whole new building.

However, the economic prospects have to clear up, as even the outsourcing and offshoring multinationals show financial trouble, whereby the back-to-core strategy means that the investments in non-core regions are decreased dramatically. The crisis however, can also work in the other direction, as the offshoring and outsourcing of the service tasks is a great money saver, which in economic worse times can also result in investment.

The third trend is a consequence of the financial crisis: the low office market delivery and take up activity. As there is a decreased demand, the projects in the pipeline were put on hold, waiting for better economic prospects and demand. Jones Lang LaSalle (JLL) Hungary (2009) reports a last completion 'wave' in the first half of 2010, to be followed by a standstill on the development market. Halfway 2010, the vacancy rates for 'A' type buildings are around the 24-25% levels (Eston, 2010), whereby the end of 2010 saw a vacancy rate of 25,7% (EHL, 2011).

This does not mean however, that the market will be static during and following 2008 crisis years. There has been a great deal of activity in the market, as various re-lease deals between the lessor (landlord) and lessee (tenant) were signed (Czikós, 2010). In 2009 and the first half of 2010 these lease renewals were the most common form of transactions (DTZ, 2010).

According to the 2010 market reports (CBRE, 2011; Eston, 2010) the IT, the high-tech, the financial service centres, the consultancy companies and the manufacturing/industrial sector are showing the largest transactions. In DTZ (2011c)'s most recent office report on Quarter 1 of 2011, this is still visible, as the strongest lease activity came from the IT/hi-tech/telecom sector, representing 30% of the total take-up, followed by the business services sector (21%) and the industrial/manufacturing sector (16%).

Closely related to the changing type of transactions in the market as consequence of the financial crisis the fourth trend is visible: the build-to-suit type of office deliveries. Although reported before the crisis, when e.g. Vodafone moved into the Millennium Tower in 2006 (Laczkó, 2010), their share in transactions rose over the years. These pre-lease deals guarantee the relocation of a firm towards the newly delivered building and therefore allow the developer to 'suit' the final lay out of the building to the tenant's wishes. This trend seems to replace the speculative building in the market, especially when financial situations tighten and banks, where the developer borrows the construction money, want more security of their investment. These types of deals are not new in the market though, as the construction of the Millennium II and III Tower, were, about 50% of Tower II and III pre-let to respectively Vodafone and Morgan Stanley (Laczkó, 2010).

Prerequisite for most of the trends is the foreign firm's choice to lease instead of buy, a logical choice, regarding that *'firm cannot afford to have tens or hundreds of millions of forints in real estate, while this money might be necessary for wages in the next month due to the setback of orders'* (Pintér, 2009). The firm's need for liquidity and market flexibility makes leasing the optimal choice, especially as *'many enterprises often move to a new leased office or make significant transformations every couple of years'* (Pintér, 2009). Even the companies that possessed an office property due to a historical tradition nowadays choose to sell their property and lease office space, as recently has been the case with Nestlé, signing for Millennium Tower II in 2009.

The fourth trend is the development of more multi-functional projects in the central sub-markets, which points out in mixed use of retail and office buildings. Usually the ground floor of an office contains retail activities, or other services functions that increase the quality of life in the office and in the surrounding of the office.

The fifth trend is the need and the creation of very large office buildings, as they are requested by tenants. Especially tenants looking for over 5000 m<sup>2</sup> saw a strong increase in the last years (BBJ, 2011a), as also has been visible in the completion of office space, as half of the 12 new office buildings were larger than 10,000 m<sup>2</sup> (Eston, 2010). The crisis however, made the larger office size demanding tenants have to adjust, as the office spaces are very segmented and unsuitable for major tenants. DTZ (2011d) states that ‘*companies looking for larger headquarters may find that only a few landlords can offer large contiguous office space as currently there are only eight buildings with vacant units over 10,000 sq m (DTZ, 2011d).*’ This will prompt larger tenants to start their search earlier and having to sign pre-lease deals, restricting their mobility (BBJ, 2011a). On the other hand, this means that ‘*special needs as finishes and furnishing can be adjusted to the companies wishes (BBJ, 2011a)*’, which shows the potential of the earlier indicated trend to build-to-suit.

The sixth trend is the development of the office markets in the larger provincial cities, even during the crisis. These rural developments are almost purely created by demand by foreign Shared Service Centres. The office market in these provincial cities is still very small and is not able to supply high quality building, as in these towns the high quality office developers do not expect a good return on their investment. This lack of demand for developers is from an SSC point of view a lack of supply, which makes them avoid these provincial cities. This process can only be ended by applying a build-to-suit way of office development.

The office area explanation of chapter 5.5 already dealt with the seventh trend: the green office developments. The need for road and public access, as eighth and final trend, has already been reported in 6.3.1 and 6.3.2.

#### **6.3.4. Budapest office market dynamics**

For empirical evidence of these trends, an overview of recent office activity is shown in table 6.1. It shows only 6 office developments in the pipeline, which can be expected, as among many of the interviews, Borbély (2010) predicts very limited new available supply until end 2012 and more office openings only in 2013.

**Table 6.1: Office projects planned for delivery in 2011/2012**

<b>Project</b>	<b>Location</b>	<b>Size (sqm)</b>	<b>(Estimated) Delivery</b>
Millienium Tower K&H	South Pest	52,000	2nd half 2011
Green House	Váci út	17,800	December 2012
Váci Greens	Váci út	15,500	Autumn 2012
Laurus Office Building	Non-Central (other)	15,000	2nd half 2011
Akadémia Park - Officium	Non-Central (other)	13,000	Delivered Q2 2011
KÖKI Offices	Non-Central (other)	7,000	2nd half 2011
CDO Calasanz	CBD	1,700	Delivered Q1 2011

Source: DTZ, 2011c&d; EHL, 2011; Kingsturge, 2011; Skanska, 2011; Vacigreens.hu, 2011

Already in 2008 the K&H Bank signed a pre-lease contract with TriGranit. According to this, Trigranit Zrt is going to develop a 40,000 square-meter large headquarter office building in the Millennium City Center (Eston, 2009). Furthermore, the Laurus Office Building saw a pre-lease deal of 3600 m<sup>2</sup> and KÖKI Offices a pre-lease deal of 2000 m<sup>2</sup> (JLL Hungary, 2011).

This means that in the upcoming year that vacancy rates will stabilize, as around 66% is already pre-let (DTZ, 2011c). This is the opposite of 2009, when new deliveries were almost empty, thereby causing a great rise in vacancy rates. This can be seen as a first indication of



an improvement of the office market. EHL (2011) also finds a slight reason for optimism as they state *'that although the market situation is still bad, the worst seems to be over (EHL, 2011).'*

Interestingly enough was the development of Tópark, a residential, retail and office project at a location, 15 km away from Budapest, to the West of Budaörs, close to Törökbálint. The future of this project has been a question mark for all of the consultancy related interviewees, as it lies far away from Budapest. So, when EHL (2011) reported the project was on hold due to financial problems, this was not a surprise.

Lastly, The "Laurus Offices" project comprises three topquality "A-class" towers with a total effective area of 15,000 m<sup>2</sup> (14,000 m<sup>2</sup> offices and 1,000 m<sup>2</sup> retail space) and is due for completion by the end of 2011, thereby being the only speculative office project entering the Pest side of the market. This construction summarizes the developments indicated above, as the building provides a large office space, is situated in a green area, applies 'green' techniques and its location, away from downtown, with excellent public transport connections as it is just ten minutes away from both the city centre and the Budapest airport (Laurusoffices.hu, 2011).

#### **6.3.5. Policy changes**

There is need for a stronger municipality within Budapest, as the districts still have too much decisive power, supported by a variety of taxes they collect, which makes them less dependent on the municipality. The Podmaniczky Plan, 2005-2013 is the Medium Term Urban Development Program of Budapest, created by the Municipality of Budapest in 2004. It should be the leading development programme for the entire city, were it not that within the programme the need for financial sources and the therefore absence of power to enforce changes is visible: *'The ideas briefly outlined above include regional and horizontal programme elements that in theory could be realised in the medium-term. However, given the city council's budget it would be very unlikely for all this to be implemented. Among the necessary development programmes choices would have to be made (Municipality of Budapest, 2004).'*

For a more coherent urban development of the city of Budapest, these financial and power struggles with districts have to be dealt with.

#### **6.4. High potential sectors**

The analysis of the history and development of Budapest and in a greater picture Hungary over time provides a definition of the most important economic sectors. These are expected to carry the economic development of Hungary in the upcoming decades, as the global economic crisis of 2008 is being conquered. Various reports, interviewees and statistical evidence point towards the definition of six economic sectors. All sectors have seen a strong foreign investor's role in them, which over time continues to grow and develop, thereby boosting the economic development of Hungary. Furthermore, for a long time, the Hungarian government has considered these sectors priority sectors (ITDH, 2005; 2007b). All sectors have a strong relation with Budapest, as it is playing an important role in the network within a specific sector.

Although not mentioned below, other sectors that play an important role in Hungary's economy are the construction, healthcare, leisure and tourism sectors.

As clusters occur in most high potential sectors, the overall cluster development can be traced back to the Hungarian governmental policy and the European Cluster Policy Group.

Over time, but especially in the last two to three years, the cluster policy has become one of the key elements of Hungarian economic policy, recognizing and supporting around 100 clusters throughout the country (Novak, 2011). Together with the € 1.5 billion EU budget, this is making it possible for Hungary to make a long-term consistent cluster policy. The Hungarian Pole Program, responsible for executing governmental policy, strives for cluster development and for the improvement of the business environment in seven regional centres: Debrecen, Győr, Miskolc, Pécs, Szeged and the Székesfehérvár-Veszprém axis.

#### **6.4.1. The automotive sector**

The first and most important within the manufacturing sector has been the automotive sector. As the plants of various auto producing companies as Suzuki, Audi, Opel and Daimler (Mercedes) are to be found in the North-Western part of Hungary, the role of Budapest is less strong as with the other potential sectors. Still R&D plays an important role within the automotive industry, as they continuously expand their R&D investments in Hungary (Kukucska, 2010). The strong connection with the universities that has been reported in the last years shows the potential of the automotive sector R&D.

Direct examples of the importance of this sector are the major investments in the close foreseeable future. The FDI pipeline shows huge investments in the automotive industry, by a variety of investors. In the upcoming years Audi Hungária Motors plans to boost capacity at its Győr factory and build additional models, creating 1800 jobs. GM Powertrain-Magyarország in Szentgotthárd will also increase its engine production capacity, thereby creating 800 new jobs. The largest foreign investment in Hungary (Kukucska, 2010) is the establishment of the Kecksemét manufacturing plant by Daimler AG, to produce 100,000 Mercedes cars, thereby eventually creating around 2000 jobs and attracting a large amount of supplying firms in the future (Kukucska, 2010; BBJ, 2011d). The start of production, planned around the summer of 2011, could add 0.6 percentage points to Hungary's GDP growth (BBJ, 2011d).

#### **6.4.2. The logistics sector**

Hungary presents itself as the ideal logistic hub in Europe, with strategic position in the heart of Europe, as well as its role as one of the most important transport nodes in the Central East Europe (ITDH, 2007a). Over the years multinational producing and trading companies as GE, Renault-Nissan, General Motors, National Instruments, Tesco and Philips have established their logistics/distribution centres in Hungary. Most of them are to be found in the greater Budapest area, where more than 30 modern logistics and warehouse parks of approximately 1.3 million square metres have been developed in a 30 kilometre radius around the capital, primarily along the M0 ring road (ITDH, 2010b).

Nowadays the national government policies are aimed at the construction of motorways, which together with the 206 industrial parks provide a large amount of greenfield or brownfield investment opportunities (ITDH, 2010b). This is the result of the creation of an industrial park network over the last couple of years (Czifrusz, 2010), as there is not one town in the country that does not have an industrial park in its neighbourhood within 30 kilometres at the minimum. At these parks, the companies can enjoy all the benefits ranging from production to delivery and a wide selection of services.

Recently, the financial crisis has put a halt to a great deal of economic activity, but the logistics sector still saw major developments in 2010 (EHL, 2011). Mostly build-to-suit projects were delivered and demand improved compared to 2009, mostly because of one of

the lowest occupational costs in Europe (DTZ, 2011a). This shows a bright future for the logistical centre.

#### **6.4.3. The IT sector**

Hungary proved to be one of the Eastern European countries most open to outsourcing, resulting in a high share of this segment within the IT services market. The Hungarian ICT market grew with 50% between 2002 and 2007 (ITDH, 2009c), but has been one of the most affected by the economic crisis since 2007 (Vass, 2010).

However, global outsourcing providers of the caliber of EDS, Accenture, IBM and Sykes are well represented in Hungary and they are consistently increasing their market share by focusing strongly on IT services (Zimmermann & Harzer, 2005). This sector is relatively well developed in Hungary and showed robust growth.

Furthermore, Hungary has grown into one of the major players in hardware production in Central and Eastern Europe and leads the region for computer assembly and communications equipment manufacture (ITDH, 2009c).

For the future of this sector, the low wages, the strongly developed R&D sector and cooperation with universities, the increasing amount of IT facilities at universities, favorable policy environment with low corporate taxes and investment incentives (Zimmermann & Harzer, 2005) and the highly skilled, cost-effective workforce, shows a great potential in IT related activity to take a leading role in contributing to the development of the Hungarian economy.

#### **6.4.4. The R&D and Biotech sector**

The Hungarian biotech sector is one of the most advanced in the CEE and is the 5<sup>th</sup> largest drug producer in Europe (Kukucska, 2010). Over the last years it has seen an increase in production facilities and R&D centres and showed the best track record in the region for FDI in the pharmaceutical sector (Vass, 2010). The most important investment however, was the establishment of the Headquarters of the European Institute of Innovation and Technology. With its goal to revitalise the EU innovation landscape & bringing together all three sides of the knowledge triangle: Business, Higher Education & Research & Technology, of which entrepreneurship is driver (De Bruin, 2011).

The essence of the government's R&D policy is defined in its medium-term Science, Technology and Innovation Strategy for the period 2007-2013 (adopted in March 2007). The general objective of the strategy is to drive the Hungarian economy through knowledge and innovation in the medium term, and to help Hungarian companies offer competitive products and services on the international market (ITDH, 2010).

In their 'learning region' writings Cooke and Morgan (1998) identify the public institutions as 'animateurs' of the innovation systems, which in turn are necessary for optimal R&D results and to experience regional economic growth. Radosevic (2002) however, states that "*in CEE we cannot yet find regional systems of innovation and cooperative networks but only local centres of industry excellence and loose project networks.*" Recent attempts have been made to create Regional Knowledge Centres, to foster the creation of research and technological innovation centres at universities. 19 of these Centres have been established in Hungary in the last five years, and these have been conducting internationally competitive, application-oriented research projects (National Innovation Office, 2011).

R&D spending achieved only 1pc of GDP in 2008, although, it's overall value more than doubled between 2000 and 2008 (Kukucska, 2010). But, there has also been a trend of decreasing expenditure on R&D by the government over the years 2000-2009 (KSH, 2009). This has been largely compensated by expenditure from business enterprises, as their investments in R&D increased with 28% in 2008. However, this still asks for rethinking future policy, especially when policy programs as the

#### ***6.4.5. The electronics sector***

In the 1990s Hungary emerged as a major global production location in the electronics industry, as it produces 34% of the regional output in the CEE and saw the production grow 80% between 2000 and 2008 (Vass, 2010). Nowadays, Hungary is the largest electronics producer and exporter in the CEE, with foreign investors in information technology, communications and consumer electronics.

In telecommunications, foreign manufacturers of mobile devices and removable parts (namely Ericsson, Nokia and Siemens) have set up centres of excellence in Hungary, spurring innovation and new applications. This is also reported in the business services location map of chapter 6.4. Furthermore, development of the information technology (SANMINA-SCI, Flextronics and Philips) and a number of companies supplying auto electronics parts (such as Temic, Delphi and Bosch) is expected to continue to boost the electronics sector (ITDH, 2009a).

The cooperation between universities and multinational companies, particularly in telecommunications, electronics and medical research, the more than 3000 engineering graduates per year and the availability of more than a thousand Hungarian small-and medium-sized enterprises provides a good opportunity for future investment.

#### ***6.4.6. Shared Service Centres & Business Process Outsourcing***

The outsourcing and offshoring of service activity over the years, collectively labelled as the business services in this thesis, consist of the Shared Service Centres, Business Process Outsourcing and the in 6.4.3. mentioned IT Outsourcing.

The first regional service centres in Eastern Europe appeared in Hungary in 2000 and since then a constant growth has characterized the sector. Sass (2010) defines three distinct types of SSCs: regional, European or global centres. They increase in size when the greater area is being serviced from Hungary. Most of the regional centres established in Hungary are involved in financial, accounting, HR, ICT and other back-office activities.

So far, most sources state that around 50 companies have established their long-term presence here, employing a total of 25,000 employees, including ExxonMobil, IBM, Sykes, GE, Morgan Stanley, Diageo, Avis Europe, Lexmark and Celanese (ITDH, 2010c).

The main attractive factors are the high quality graduate labour pool with strong language skills, low wages, personal and corporate taxes, low rents and a tenant-favoured office market (ITDH, 2010d). Zimmerman & Harzer (2005) point at the stability of Hungary in CEE. For the future of the service sector however, policy measures will play an increasingly important role. This is related to the balance of the right people at the right jobs. As more and more service centres focus in Budapest there is starting a competition for the graduating university students, which are the main target of the SSCs because of their education and language skills (ITDH, 2010a). This effect is visible in two negative developments which limit the inflow of new SSCs in Budapest. The first, as previously mentioned is competition for employees, this directly influences one of the top Budapest attraction point: the qualified

labour force, whose availability is shrinking. The second is a logical consequence of the competition, as the market tightens the wages will increase, which make Budapest less attractive.

As reported by Eston (2010) and JLL Hungary (2009) this leads to the increased foreign services sector activity in the provincial cities, which see a rising demand for office space, based purely on these SSCs.

Furthermore, there have been taken steps to alter the educational program, aiming to create a better language speaking labour pool. Endrődy (2010) states that the current SSC and BPO employees are 85% graduates from a university, as they speak most of the languages and acquire the skill to work in a multinational environment.

In the last years however, a specialised vocational training programme is being developed by the Ministry of Education, for both shared services and customer services. Its goal is to improve the language skills of younger and lower educated people, by starting educational programmes on high schools already (Endrődy, 2010). Also for the non-active part of the working age population there are steps taken to start developing their language skills and level of education.

The most recent assessment of the Service sector in Hungary was taken by PWC (2010), who show that the SSC/BPO sector to be recognized as key factor for the development of the Hungarian economy. According to their SSC Life Cycle models, Hungary's SSCs still have years of growth ahead, therefore they classify Hungary to be *'well positioned among the winners, with excellent prospects for further improvements in the future'* (PWC, 2010).

For the upcoming two or three years the SSC/BPO activity towards Budapest can increase again, as it cooled down in the last two crisis years. The real potential however lies in the bigger university cities, as they have seen an increase of SSC/BPO development. Especially with the educational measures taken by ITDH, this provides an excellent opportunity for the future.

A small glance on the other side of the medal shows that the outsourcing of services does not involve large numbers of jobs to disappear in Western European countries. One of the most recent movers, Laurastar, has indicated that the company plans to move service activities from the Netherlands, Belgium, France and Germany to the Hungarian location. The total number of jobs involved is around 60 (BBJ, 2011g).

## 6.5. Concluding statements

- Macro-economically,
- Hungary is very dependent on the global economic situation, as the small domestic market can not support Hungary's economy
- The high public debt has a strong negative impact on economic growth
- The fiscal policy, the education system and pensioning system are all under pressure, especially when the expected economic growth levels do not occur
- Recovery from the crisis occurs very slow, as neighbouring countries all show better economic growth
- The automotive, logistics, IT, Biotech, R&D and SSC/BPO sectors are the most promising sectors for future economic growth
  
- Micro-economically,
- The (construction of) public transport and road networks have a significant impact on future location choices from foreign office-based firms
- The office market moved from speculative towards build-to-suit developments, with a higher amount of pre-lease deals, thereby lengthening the relocation process
- The office-based firms are moving away from downtown towards bigger and greener office buildings, with more expansion possibilities,
- thereby still being connected to the public transport and road networks and showing spatially clustered location behaviour
- Some minor office developments are taking place in the larger provincial towns

## **7) The future locational map of foreign office-based firms in Budapest**

### **7.1. Introduction**

As stated in chapter 6, the development of the office market has been struggling since the global crisis of 2008. Only a few office deliveries took place, more subsidiaries renegotiated their leasing deals, but there was an increase in demand by the Shared Service Centres and the Business Process and IT Outsourcing service activities.

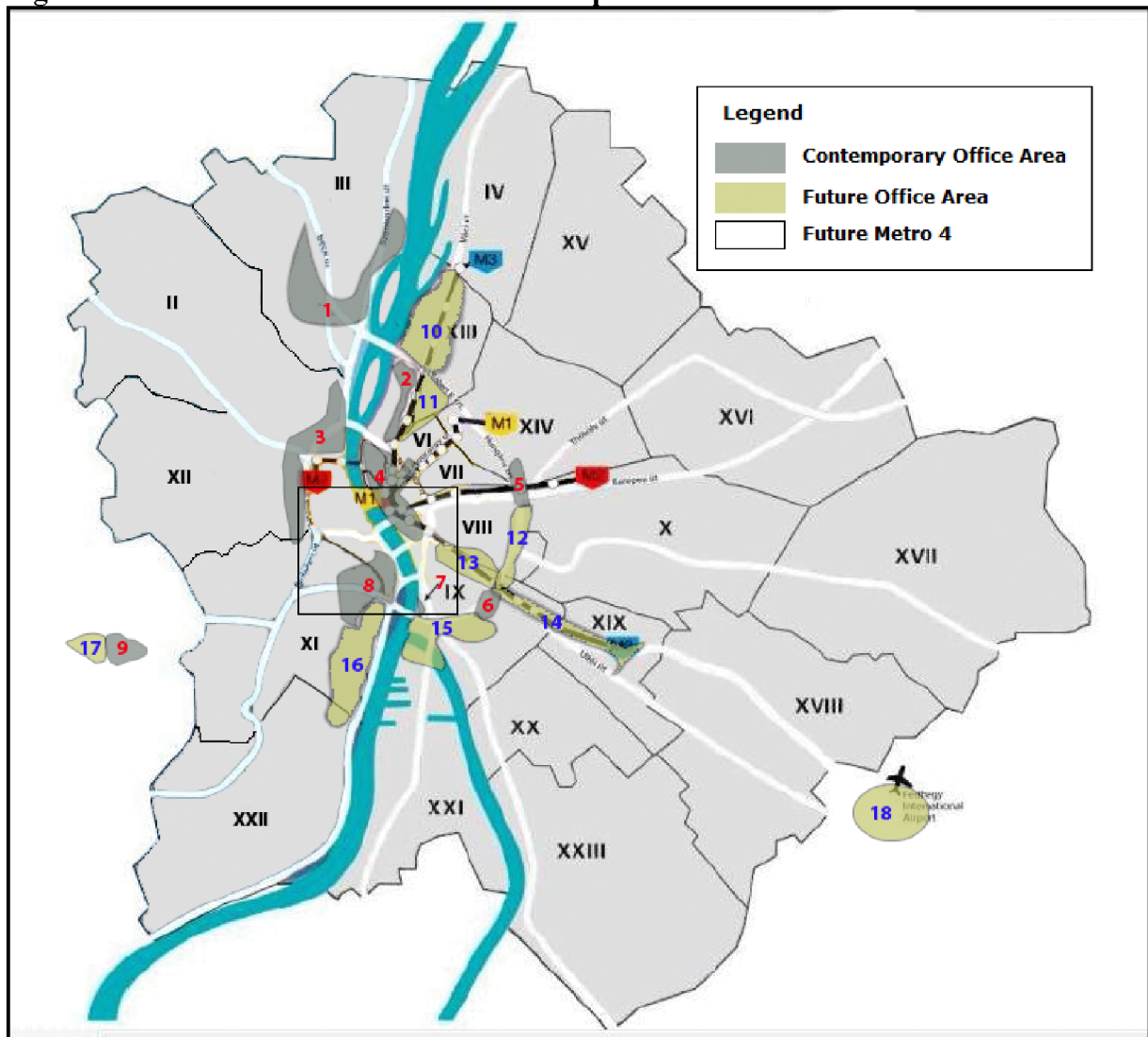
To summarize chapter 6, the most important factors in determining the future location map of Budapest are:

- The office move away from downtown
- The rise of environmentally conscious supply and demand
- The increasing importance of the airport as transport hub
- The office-based location preferences correlate with public transport and main roads
- The movement of SSCs and BPO-activity towards provincial cities

This has consequences for the future location map, as will be shown in figure 7.1. The so-called process of trickling down is better explained in chapter 7.3, where after the Shared Service Centre, Business Process and IT Outsourcing map shows current business service activity, thereby being an indication of future office-based firm developments.

## 7.2. The Future office area location map

Figure 7.1: The future office area location map



Source: Author's creation, based upon CBRE office data from Mr. Borbély, 2010

At first sight, a strong relation with the already existing office hubs is visible. Most connecting areas share the same characteristics as their 'contemporary' neighbouring areas. Therefore the focus here lies on the recent and future developments of the area, and not on the history of the area

10) The Váci út sees a great deal of activity, therefore it is extending to the north, whereby more and more brownfield investments are undertaken to convert the old industrial buildings towards a modern office building. The Capital Square has been one of the most recent developments here

11) Close to the Nyugati Station there has been a lot of building activity, as the public transport and road access is excellent. There were plans for a new government district, but due to the recession and necessary cutbacks this never came off the ground. The Eiffel Square is one of the most recent developments here



12& 13& 14) The Hungária Kórút and Könyves Kálmán Kórút, as well as the Üllői út and Ferihegyi Repülőtérre vezető út are major access roads towards and from Budapest. The public transport is also highly available in these areas, which has resulted in the rise of office buildings in this area. With congestion rising, these offices avoid the major downtown traffic jams and smug alerts, but are at close range of reaching the inner city within minutes, especially by public transport. Mostly empty spots will be targeted, as seen with the Arena Corner office, which along the roads out of Budapest space to build will increase. Also, the globalisation argument applies, especially for the Üllői út and Ferihegyi Repülőtérre vezető út developments.

15) This area has been related to the DunaCity development of residential, retail and office complexes along the Danube. Borbély (2010) pointed out that sewage improvements in those areas have resulted in cleaner water in those areas, which makes them perfect for these type of investments. The project does not seem to evolve quickly though, but other major investors are also looking at this area for investment.

16) The 11<sup>th</sup> district has seen major office developments over the last years, especially the development of Office Garden, attracting major tenants to this area, has been one of the biggest. Shell, Tata and Syngenta relocations were among the biggest in the market, all moving into Office Garden II, bringing occupancy up to 85% (Realdeal.hu, 2011). Furthermore, to the West of the office area, the Kelenföldi station will see an increasing importance for Budapest. The arrival of Metro 4, together with the train station will make this transport hub the Western City Gate to Budapest, a great place for investments. Borbély (2010) expects big developments in this area when the economy picks up.

17) Budaörs will also see more and more office developments, mostly because of the large logistics sector already present there, who are willing to establish more and higher value added functions in a familiar place.

18) Connecting to the globalisation story, the importance of the airport has been seen to rise, which together with the rising congestion makes office-based firms want to locate in a more green environment and close to the airport. The Quadrum office development is the first professional office building at the airport, established in Q4 2008 and still in development for later office deliveries. Considering the congestion and globalisation expectations it will not be the last.

Overall, the dominance of the 9<sup>th</sup>, the 11<sup>th</sup> and the 13<sup>th</sup> district in office area development, as reported by Eston (2010), is clearly visible in the office area location map. Furthermore, the in chapter 6 indicated trends that office-based firms will move away from downtown, their correlation with road and public transport networks and a rising importance of airport in the global economy is visible. The proximity arguments also show in the map, as the newer areas locate closely to the former office hubs. This is because services cluster in space. The further office developments at the airport are based upon the globalisation expectations from McCann & Acs (2009) and the already developed Quadrum office building.

### 7.3. Trickle down in Hungary

The offshoring and outsourcing in Hungary is concentrated very heavily in and around Budapest. The main reason is simply a lack of adequate infrastructure and resources elsewhere in the country (Zimmermann & Harzer, 2005). This means that Budapest shows a competitive disadvantage, as the bulk of offshoring activity is focused on this region, showing in the steep labour costs in and around Budapest.

This asks for the movement of Shared Service Centres (SSC) and Business Process and IT Outsourcing (BPO & ITO) activity towards the provincial cities, a trend already visible some years ago, but as Bunna (2010) shows, the recent crisis years changed the perception to Hungary, as it is a safe place to invest.

Deloitte's Global Location & Facilities Services, referred to in ITDH (2010c), has searched and examined Hungary for potential SSC locations. Five good – though admittedly little known – “pearls” emerged from Deloitte's analysis: Debrecen, Kecskemét, Pécs, Székesfehérvár and Szeged.

Furthermore, the R&D innovation policy aims at the development of Debrecen, Miskolc, Pécs, Szeged and the Székesfehérvár-Veszprémaxis. This policy should result in the establishment of offshored R&D activities in Hungary in the years ahead. These towns show two strong advantages over Budapest, as there are graduates willing to work for these multinational companies for lower wages, and the availability of more generous tax breaks and incentives in regions outside of Budapest (Zimmerman & Harzer, 2005).

In the Hungary's university cities Debrecen, Kecskemét, Pécs, Szeged and Székesfehérvár office areas are for rent for between EUR 7–11 per m<sup>2</sup> per month, which is a substantial discount on the capital. Up until today however, these cities see only a few office developments that are mainly driven by shared service centres (JLL Hungary, 2009).

**Table 7.1: Office stock in the larger provincial cities**

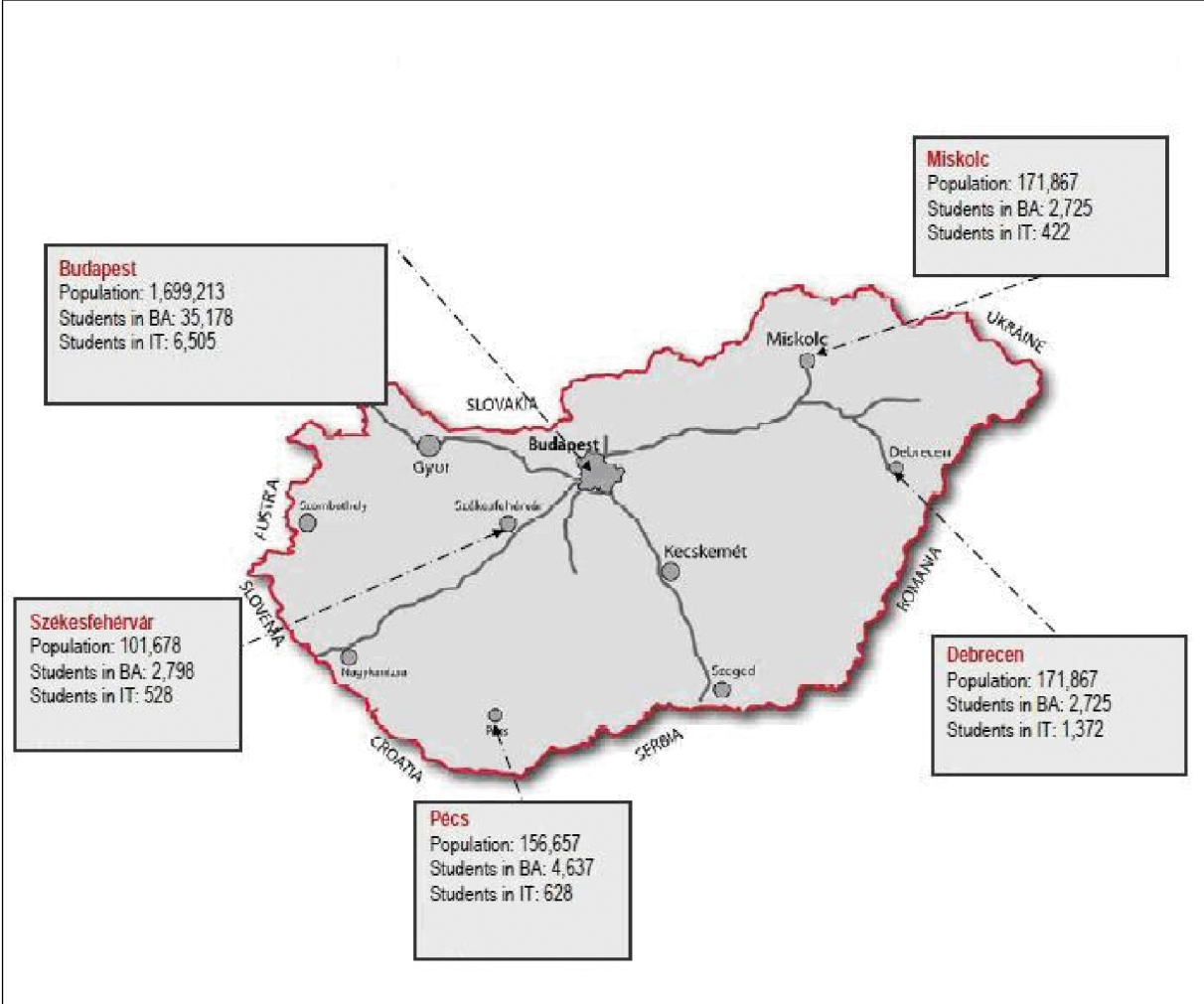
City	Available office stock (m <sup>2</sup> )	Vacancy rate
Debrecen	50,000 m <sup>2</sup>	36%
Kecskemét	50,000 m <sup>2</sup>	10–15%
Pécs	50,000 m <sup>2</sup>	10–15%
Szeged	50,000 m <sup>2</sup>	10%
Székesfehérvár	15,000 m <sup>2</sup>	22%

Source: ITDH, 2008

Eston (2010) shows the spread from Western European call- and shared service centres towards the larger provincial cities, even during crisis periods. Bunna (2010) also aims at the construction of infrastructure in these cities, as the combination of infrastructure and lower cost offers a great attraction to investor. For the future of the SSC, Bunna (2010) predicts an increase of about 2000 jobs in the next two years. This is based on the early stage of the life cycle model in which Hungarian SSCs are framed (PWC, 2010).

These developments are visualized by figure 7.2. that shows the SSC, BPO and ITO related activities in Hungary, based on the database collected by the author. As these business service activities show to be the fastest relocating sector (Pellenbarg, 2005; Van Steen, 2005), this shows the increased importance of the provincial cities, which together with Budapest should create an attractive location for future foreign investors. The database can be found in appendix D.

**Figure 7.2: The SSC, BPO and ITO map of Hungary**



Source: author's database, appendix D and JLL Hungary, 2009

## 8) Conclusion

The relocation of firms towards Hungary started when the economy opened towards the West in the late 1980s, early 1990s. Most international firms showed interest in Hungary, as they saw possibilities to expand their markets and profit from the cheap labour and production costs. Over the years, a trend towards higher value added activities and the service sector activities became visible, as IT technology allowed the offshoring and outsourcing by especially Western-European firms, of a variety of service activities towards countries as Hungary.

The location factors that attracted these firms towards Hungary can be summarized in the geographical location, the good level of infrastructure, the political and economic stability, the business environment and the tax and regulation system. But the strongest location factor is the cheap, skilled and productive labour force, speaking many languages, thereby responsible for the attraction of the major investments in the business services and R&D sector, especially after the Millennium.

The role of Budapest is characterized by the provision of this labour force, the quality of life and office buildings and the role of the capital within Hungary's economy, as almost all regional headquarters and services located here over the years.

The location of these foreign office-based firms in Budapest is most strongly related to the accessibility, both by road and by public transport and to the presence of prestigious buildings and their surrounding, as image and quality factors are of major importance to these type of firms. Furthermore, the expansion possibilities, the presence of other service firms and institutional factors play a role in the locational choice of the foreign firm.

In the recent years however, business services, the most mobile type of service, have seen a spread from downtown to the edges of the city, still remaining very accessible by car and public transport, but also aiming at a better and greener working environment. This is strongly related to the nowadays importance of image, as representative buildings and environments are ranked highest among the location factors, but also a result of the agglomeration diseconomies as the rising wages, increased scarcity of workforce and congestion. Other services are expected to follow these trends, as already reported in the banking sector. As these higher value activities tend to cluster, this process will lead to an increased activity in these more remote office areas, leading to new demand and developments in these areas.

For the future development of Hungary, it is clear that the secondary cities are ready to deliver. University cities as Debrecen, Kecskemét, Pécs, Szeged and Székesfehérvár provide sufficient amounts of graduates that are able to work for multinationals. Small numbers of Shared Service Centres, Business Process and IT Outsourcing and R&D activities have already located here in the recent years.

Remarkably, this process is strongly driven by the forces of the economy, thereby showing strong similarities with the changed FDI locational preferences of multinationals in the end of the nineties, looking for cheaper wages and available workforce in Eastern Hungary. The role for the Hungarian government lies with the development of the language education programme and the development of a sufficient amount of infrastructure in and towards these cities. Lastly, there is need for the development of the supply side of the office market in these cities, for which the build-to-suit type of office development proves highly suitable.

## 9) References

- Alchian, A. A. (1950), *Uncertainty, Evolution and Economic Theory*. In: Journal of Political Economy, vol. 58, p. 211-221
- Amin, A. (2000), *Industrial districts*. In: Sheppard E. & T.J. Barnes (eds.), *A companion in economic geography*. Oxford: Blackwell Publisher
- Antalóczy, K. and Sass, M. (2001), *Greenfield investments in Hungary: are they different from privatization FDI?* In: UNCTAD (Dec. 2001), *Transnational Corporations*, vol. 10, no. 3, p. 25-38
- Aspray, W., Mayadas, F. and Vardi, M. Y. (eds.) (2006), *Globalization and Offshoring of Software*. ACM Job Migration Task Force, via [www.acm.org](http://www.acm.org), visited 01-06-2011
- Atzema, O.A.L.C., J.G. Lambooy, A. van Rietbergen & E. Wever, E. (2002), *Ruimtelijke Economische Dynamiek; kijk op bedrijfslocatie en regionale ontwikkeling*. Bussum: Coutinho
- Bale, J. (1975), *The location of manufacturing industry; conceptual frameworks in geography*. Edinburgh: Oliver&Boyd
- Barta, G. (2005), *The role of Foreign Direct Investment in the spatial restructuring of Hungarian industry*. In: Barta, Györgyi – G. Fekete, Éva – Kukorelli Szörényiné, Irén – Timár, Judit (eds.): *Hungarian spaces and places: patterns of transition*. Centre for Regional Studies, Pécs, p. 143–160
- Barta, G., Beluszky, P., Czirfusz M., Győri R. and Kukely G. (2006), *Rehabilitating the Brownfield Zones of Budapest*. Discussion Papers No. 51, Centre for Regional Studies of Hungarian Academy of Sciences, Pécs
- BBJ (2011a), *Bid now, move three years later*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-08-2011
- BBJ (2011b), *Budapest aims to make HUF 160 bln of tram, trolley bus developments*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-08-2011
- BBJ (2011c), *Congestion charge launched in Budapest in two years*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-08-2011
- BBJ (2011d), *Daimler hires 1000th employee at plant to open in Hungary next year*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-06-2011
- BBJ (2011e), *Govt go-ahead to MÁV, BKV debt assumption, PPP buyout cap*. Via [www.bbj.hu](http://www.bbj.hu), visited 12-08-2011
- BBJ (2011f), *Hungary Q2 growth 'big disappointment' – analysts*. Via [www.bbj.hu](http://www.bbj.hu), visited 17-08-2011
- BBJ (2011g), *LauraStar opens iron service center in Hungary*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-06-2011
- BBJ (2011h), *Office market stays marginal in the provinces*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-08-2011
- BBJ (2011i), *Traffic at Budapest international airport hits record high in June*. Via [www.bbj.hu](http://www.bbj.hu), visited 01-08-2011
- Bertaud, A. (1999), *The spatial development of Budapest*. Via [www.alain-bertaud.com](http://www.alain-bertaud.com) visited on 08-05-2011
- Boer, L. De, C. Cornelissen, J. Harten, H. Heerkens, B. Kuipers, P.H. Pellenbarg, R. Reijts, P. Schuur, F. Sijtsma, L. Van der wegen (2001), *Core centra en vestigingsplaatskeuze*, TNO INRO, Delft
- Borbély, G. (2010), CB Richard Ellis, Senior Analyst, Research and Consultancy, *Author's Interview*, held on 04-06-2010

- Brons, L.L. & Pellenbarg, P.H. (2003), *Economy, Culture and Entrepreneurship in a Spatial Context*. In: Marszal T. (eds.), *Spatial Aspects of Entrepreneurship*. Warsaw: Polish Academy of Sciences, p. 11-36
- Buck Consultants International (2011), *Support centres on the move in EMEA*. Via [www.ssonetwork.com](http://www.ssonetwork.com), visited on 09-05-2011
- Budapest Research Forum (2011), *Q1 2011 Office report*, Budapest
- Bunna, G. (2010), *Hungary's SSCs should branch out of Budapest*. In: Transform, Issue 6, 2010, via [www.pwc.com](http://www.pwc.com), visited on 09-05-2011
- Capello, R. (2007), *Regional Economics*, Routledge, London
- CBRE (2009), *EMEA Location Trends*. Via [www.cbre.hu](http://www.cbre.hu), visited 22-04-2010
- CBRE (2011) CB Richard Ellis, *Market View: Budapest Office Q4 2010*. Via [www.cbre.hu](http://www.cbre.hu), visited 22-06-2011
- CIA (2011), *The World Factbook: Hungary*. Visited on: 11-02-2011
- Christaller, W. (1933), *Die zentralen Orte in Süddeutschland*. Jena: Gustav Fischer Verlag
- Coase, R.H. (1937), *The nature of the firm*. In: *Economica*, p. 386-405
- Commission for Economic and Financial Affairs (2011), *Commission's mission to Hungary welcomes commitment to structural reform and calls for further details on deficit cuts*. Published: 11-04-2011 via [www.europa.eu](http://www.europa.eu). Visited on 12-04-2011
- Cooke, P. M. and Morgan, K. (1998), *The associational economy: firms, regions and innovation*. Oxford: Oxford University Press
- Csikós, S. (2010) TriGranit Development Corporation Head of Office Leasing, *Author's Interview*, held on 02-06-2010
- Czirfusz, M. (2010) Centre for Regional Studies HAS Junior Research Fellow, *Author's Interview*, held on 19-05-2010
- Cyert R.M., March J. G., (1963, 1992), *A Behavioral Theory of the Firm*. Cambridge: Blackwell Publishers
- De Bruin, R. (2011), *The EIT: Delivering New Solutions to the European Innovation Landscape*. Presentation at WIRE 2011, June 8<sup>th</sup> 2011
- Dicken, P. and Lloyd, P.E. (1990), *Location in space*, third edition. London and New York: Harper & Row
- Dijk, J. van, Folmer H. and Oosterhaven, J. (2009), *Regional policy: rationale, evolution and measurement of its effect*. In Roberta Capello and Peter Nijkamp (eds.), *Advances in Regional Economics*. Cheltenham (UK): Edward Elgar, p. 461-487
- Dijk, J. van & P.H. Pellenbarg (2000), *Firm relocation decisions in The Netherlands: An ordered logit approach*. Papers in Regional Science, vol. 79, p. 191-219
- Dikova, D. (2005), *Studies on foreign direct investments in Central and Eastern Europe*. Dissertation FEB, University of Groningen
- DTZ CEE (2007), *BPO in the CEE region*. Via [www.dtz.hu](http://www.dtz.hu), visited 20-04-2010
- DTZ (2010) DTZ Research, *Budapest Office Market Q1 2010*. Via [www.dtz.com](http://www.dtz.com), visited 20-04-2010
- DTZ (2011a) DTZ Research, *Budapest Industrial Q4 2010*. Via [www.dtz.com](http://www.dtz.com), visited 22-05-2011
- DTZ (2011b) DTZ Research, *Budapest Office Q4 2010*. Via [www.dtz.com](http://www.dtz.com), visited 24-05-2011
- DTZ (2011c) DTZ Research, *Budapest Office Q1 2011*. Via [www.dtz.com](http://www.dtz.com), visited 22-05-2011
- DTZ (2011d) DTZ Research, *Budapest Office Q2 2011*. Via [www.dtz.com](http://www.dtz.com), visited 02-08-2011

- DunaCity (2011), *Development Program Summary*. Via [www.dunacity.hu](http://www.dunacity.hu), visited 22-04-2010
- Dunning, J.H. (1977), *Trade, Location of Economic Activity and MNE: A Search for a Eclectic Approach*. In: Ohlin, B., Hesselborn, P-O., Wijkman, P.M. (eds.), *The International Allocation of Economic Activity*, p. 395-418. London: Macmillan
- Dunning, J. H. (1988), *The Eclectic Paradigm of International Production: a restatement and some possible extensions*. In: *Journal of International Business Studies*, vol. 19, p. 1-31
- Dunning, J. H. (1998), *Location and the Multinational Enterprise: A Neglected Factor?* *Journal of International Business Studies* (1998) 29, p. 45–66
- Dunning, J. H. and Lundan, S.M. (2008), *Multinational enterprises and the global economy, 2<sup>nd</sup> edition*. Cheltenham: Edward Elgar
- Egedy, T., Földi, Z., Balogi, A., Kovács, Z. (2008). *Budapest in the eyes of creative foreigners: the view of transnational migrants*. ACRE Report [No 7.4], Amsterdam
- EHL (2011) EHL CEE, *SEE Real Estate Market Report 2011*. Via [www.ehl.at/en](http://www.ehl.at/en), visited on 22-05-2011
- Endrődy, C. (2010) ITDH (Hungarian Investment and Trade Development Agency) Deputy Director, *Author's Interview*, held on 27-05-2010
- Eston (International Property Advisor) (2009), *Market Report 1, 2009*. Via [www.eston.hu](http://www.eston.hu), visited on 24-04-2010
- Eston (2010), *Market Report 1, 2010*. Via [www.eston.hu](http://www.eston.hu), visited on 24-04-2010
- EU Commission (2006), *The long-term sustainability of public finances in the European Union*. European Economy No. 4 2006. Luxembourg
- EU Commission (2009), *Long-term sustainability of public finances for a recovering economy*. COM(2009) 545/3. Brussels
- Eurobarometer (2005), *Europeans and mobility: first results of an EU-wide survey*. Európai Bizottság, Brüsszel
- Fazekas, K. (2000), *The Impact of Foreign Direct Investment Inflows on Regional Labour Markets in Hungary*. Soco Project Paper No. 77c. Vienna: Inst. für die Wissenschaften vom Menschen
- Fifekova, M. and Hardy, J (2010), *Business Service. Foreign Direct Investment in Central and Eastern Europe. – trends, motives and impacts*. Project Report, The Economy And Society Trust p. 28. <http://www.czechinvest.org/data/files/fdi-project-report-1981-en.pdf>
- Földi, Z. & J. Van Weesep (2007), *Impacts of Globalisation at the Neighbourhood Level in Budapest*. *Journal of Housing and the Built Environment* 22, p. 33-50
- Fujita, M., Krugman, P. and Mori, T. (1999), *On the Evolution of Hierarchical Urban Systems*. *European Economic Review*, vol. 43, p. 209-251
- Gál, Z. (2009), *Central and Eastern Europe in the global services offshoring market: evidence from the trade and location statistics*. In: *Public and Private Services in the New Global Economy XIX*. International Conference of RESER, September 24–25, 2009. Budapest. Szerk. Palócz É., Szalay L. Budapest: RESER, 2009. p. 28 [http://www.reser.net/downloads/2009-Congress-papers\\_t8384.html](http://www.reser.net/downloads/2009-Congress-papers_t8384.html)
- Gemser, G., Brand, M. J. and Sorge, J. (2004), *Exploring the internationalisation process of small businesses: a study of Dutch old and new economy firms*. *Management International Review*, vol. 44, Issue 2, p. 127-150
- Gierl, H. and Kienberger, G. (1988), *Der Erfolg einer Verlagerung der Produktion in osteuropäische Reformstaaten*. In: *Der markt*, vol. 25, iss. 1, p. 3-9. Vienna: Springer

- Gordon, I.R. and McCann, P. (2000), *Industrial Clusters: Complexes, Agglomeration and/or Social Networks*. Urban Studies, vol. 37, iss. 3, p. 513-532
- Granovetter, M. (1985), *Economic action and social structures: the problem of embeddedness*. American Journal of Sociology, vol. 91, p. 481-510
- Hajba, R. (2010) Graphisoft Park SE CFO and Investor Relations, *Author's interview*, held on 07-06-2010
- Hakanson, L. (1979), *Towards a theory of location and corporate growth*. In: Hamilton, F.E.I. and Linge, G.J.R., (eds.), *Spatial analysis, industry and the industrial environment - progress in research and applications*, vol. 1, p. 115-38. Chichester: Wiley
- Halpern, L., Wyplosz, C. (1998), *The hidden Hungarian miracle* In: Halpern, L. and Wyplosz, C. (eds.), *Hungary: Towards a Market Economy*, Cambridge University Press and Centre for Economic Policy Research 1998 p. 1-19
- Halpern, L., Körösi, G. (1998), *Corporate performance in the transition: econometric analysis of Hungarian exporting firms, 1985/1994*. In: Halpern, L. and Wyplosz, C. (eds.), *Hungary: Towards a Market Economy*, Cambridge University Press and Centre for Economic Policy Research 1998 p. 1-19
- Hastenberg, van H (1999), *Foreign direct investment in Hungary: the effects of the modernization of the manufacturing industry and the demand for labor*. Dissertation FRW University of Utrecht
- Hayter, R. (1997), *The dynamics of industrial location. The factory, the firm and the production system*. New York: Wiley.
- Hayter, R. & Watts H.D. (1983), *The geography of enterprise: a reappraisal*. Progress in Human Geography, vol. 2 issue 7, p. 157-181
- HEBC (2010) Hungarian European Business Council, *Sustainable Competitiveness: The annual report of the Hungarian European Business Council*. Via <http://www.ert.eu/DOC/09102.pdf>, visited 22-04-2011
- Holland, D., Sass, M., Benacek, V. and Gronicki, M. (2000), *The determinants and impact of FDI in Central and Eastern Europe: a comparison of survey and econometric evidence*. Transnational Corporations, vol. 9, nr 3, December 2000
- Hoover, E. M. (1948), *The Location of Economic Activity*, McGraw-hill, New York
- Hopka, A (2010) King Sturge Hungary Agency consultant, *Author's Interview*, held on 31-05-2010
- Horváth, B. (2009), *Know how IT works: SSC, software and hardware development in Hungary*. In: HINT Magazine, vol. 1, 2009, via [www.investhungary.com](http://www.investhungary.com), visited 22-06-2010
- Hotelling, H. (1929), *Stability in Competition*, Economic Journal, vol. 39, p. 41-57
- Hymer, S. H. (1960), *The International Operations of National Firms: A Study of Direct Foreign Investment*. PhD Dissertation, published posthumously in 1976. Cambridge, Massachusetts: The MIT Press
- Irodahaz.info (2011a), *Medicover moves to Eiffel Square, which is more than 90% let*. Via [www.irodahaz.info](http://www.irodahaz.info), visited 28-07-2011
- Irodahaz.info (2011b), *Capital Square*. Via [www.irodahaz.info](http://www.irodahaz.info), visited 28-07-2011
- ITD Hungary (ITDH) (Hungarian Investment and Trade Development Agency) (2003), *Logistics sector in Hungary*. Via: [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2005), *The Value Added*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2006), *Economy*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2007a), *Hungary: your gateway to Europe*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010



- ITDH (2007b), *The Value Added*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2007c), *5 key arguments to invest in Hungarian ICT sector*. Via [www.itdh.com](http://www.itdh.com), visited 26-06-2011
- ITDH (2008), *Anchoring global business in Hungary*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2009a), *Make the best of the advantages of the Hungarian electronics sector*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2009b), *R&D in Hungary: With Business In Mind*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2009c), *The ICT sector in Hungary: Converging on success*. Via [www.itdh.com](http://www.itdh.com), visited on 22-07-2010
- ITDH (2010a), *Foreign Direct Investment*. via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2010b), *Logistics centres in Hungary: A Pan-European solution*. Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2010c), *Shared Service Centres in Hungary; Corporate Presence; Life sciences; R&D in Hungary*. Presentations by the ITDH, provided by C. Endrődy
- ITDH (2010d), *SSC in Hungary: at the ready*. Via [www.itdh.hu](http://www.itdh.hu), visited on 26-05-2011
- James, K. (2009), *SSC Investor's testimonials: The decision to select Budapest*. Via [www.itdh.com](http://www.itdh.com), visited 25-05-2010
- Jones Lang LaSalle (2009) (JLL), *Onshore, Nearshore, Offshore: Unsure? A Central & Eastern European Perspective*. Via [www.joneslanglasalle.hu](http://www.joneslanglasalle.hu), visited 24-04-2010
- Jones Lang LaSalle (2011) (JLL), *Onshore, Nearshore, Offshore: Unsure? A 2011 Central & Eastern European Perspective*. Via [www.joneslanglasalle.hu](http://www.joneslanglasalle.hu), visited 24-04-2010
- Jones Lang LaSalle Hungary (2009) (JLL Hungary), *Onshore, Nearshore, Offshore: Unsure? A 2010 Hungarian Perspective*. Via [www.grafton.hu](http://www.grafton.hu), visited 24-04-2010
- Jones Lang LaSalle Hungary (2011), *Budapest city report Q1 2011*. Via [www.joneslanglasalle.hu](http://www.joneslanglasalle.hu), visited 25-06-2011
- Kingsturge (2011), *Budapest Office Market Q1 2011*. Via [www.kingsturge.com](http://www.kingsturge.com), visited 01-08-2011
- Kok, H.J. (2007), *Restructuring Retail Property Markets in Central Europe: Impacts on Urban Space*. Journal of Housing and the Built Environment vol. 22, p. 107-126
- Koó, G. (2010) Head of leasing EHL Real Estate Hungary, *Author's interview*, held on 04-06-2010
- Kotian, J. (2010), *Foreign capital returning to CEE: So far, more quality than quantity*. Erste Group Bank CEE Macro and Fixed Income Research, Vienna
- Kovács, Z. (2009), *Social and economic transformation of historical neighbourhoods in Budapest*. TEGS Magazine for social and economical geography, Vol. 100. No.4. pp. 399-416
- KPMG Hungary (2004), *Investment in Hungary*. Via [www.kpmg.hu](http://www.kpmg.hu), visited 22-05-2010
- KPMG (2010) KPMG International, *Budapest city introduction*. Via [www.kpmgglobalfrontiers.com](http://www.kpmgglobalfrontiers.com), visited 01-06-2011
- Krugman, P. (1991), *Increasing Returns and Economic Geography*. Journal of Political Economy, volume 99, p. 483-499
- Krumme, G. (1969), *Towards a geography of enterprises*. Economic Geography vol. 45, p. 30-40

- KSH (Hungarian Statistical Office) (2009), *Data on R&D activities, 2008*. Internet publication, via [www.ksh.hu](http://www.ksh.hu). Visited on 01-06-2011
- Kukucska, I. (2010), *Hungary: A favourable place for doing business*. Presentation of the IDTH, Turku, march 12<sup>th</sup> 2010
- Laczkó, M. (2010) TriGranit Development Corporation Sales Director, *Author's interview*, held on 03-06-2010
- Laurusoffices.hu (2011), *Laurus Offices*. Via [www.laurusoffices.hu](http://www.laurusoffices.hu), visited on 02-08-2011
- Lloyd, P.E. & P. Dicken (1977), *Location in space. A theoretical approach to economic geography. Second edition*. London etc.: Harper & Row
- Lösch, A. (1954), *Die Raumliche Ordnung der Wirtschaft*, Jena: Gustav Fischer Verlag
- Louw, E. (1996), *Kantoorgebouw en vestigingsplaats: een geografisch onderzoek naar de rol van huisvesting bij locatiebeslissingen van kantoorhoudende organisaties*. OTB Research Institute. Delft: Delft University of Technology.
- Mariotti, I. (2005), *Firm relocation and regional policy: A focus on Italy, the Netherlands and the United Kingdom*. Utrecht/Groningen: Knag/Faculteit der Ruimtelijke Wetenschappen Rijksuniversiteit Groningen
- Mariotti, I. & Pen, C.J. (2002), *Firm migration patterns in the United Kingdom and in the Netherlands. An end of twenty calm years of geographical interest*. In: Dijk J. van, Elhorst, P., Oosterhaven J. & Wever E., eds., *Urban Regions: Governing Interacting Economic, Housing, and Transport Systems*. Utrecht: Nederlandse Geografische Studies, vol. 303, p. 325-343
- Martin, R. (2000), *Institutional approaches in economic geography*. In: Sheppard E. & T.J. Barnes(eds.), *A companion to economic geography*. Oxford: Blackwell Publishers
- Martin, R. (2003), *Putting the economy back in its place: on economics and geography*. Paper presented at the Cambridge Journal of Economics Conference 'Economics for the Future: Celebrating 100 years of Cambridge Economics'
- McCann, P. (1993), *The Logistics-Costs Location-Production Problem*. Journal of Regional Science, volume 33 issue 4, p. 503-516
- McCann, P. (2001), *Urban and regional economics*. Oxford: University Press
- McCann P. and Acs Z. J. (2009) *Globalization: countries, cities and multinationals*, Jena Economic Research Paper #2009-042
- McKinsey (2000) McKinsey Global Institute (MGI), *Hungary for reinvestment*. The McKinsey Quarterly, vol. 2, p. 17-19
- McKinsey (2005) McKinsey Global Institute (MGI), *The Emerging Global Labor Market Part II- The Supply of Offshore Talent in Services*. A report from the McKinsey Global Institute
- McNee (1960), *Towards a More Humanistic Economic Geography: the Geography of Enterprise*. TESSG vol. 51, p. 201-205
- Meester, W. J. (1999), *Subjectieve waardering van vestigingsplaatsen door ondernemers*. Groningen, Faculteit der Ruimtelijke Wetenschappen.
- Meester, W.J. & Pellenbarg, P.H. (1986), *Subjectieve Waardering Van Bedrijfsvestigingsmilieus in Nederland*, Geografisch Instituut Rijksuniversiteit Groningen (Sociaal-Geografische Reeks 39)
- Meester, W.J. & Pellenbarg, P.H. (2005), *The spatial preference map of Dutch entrepreneurs: Subjective rating of locations 1983, 1993, 2003*. TESSG, volume 97 issue 4, p. 364-376

- Meyer, T. (2006), *Offshoring to new shores: Nearshoring to Central and Eastern Europe*. Deutsche Bank Research, August 14<sup>th</sup>, 2006. Via [www.dbresearch.com](http://www.dbresearch.com), visited 01-06-2011
- MNB (2009), *Country- and activity breakdown of FDI flows: FDI flows in Hungary\_en\_eur.xls*. Via [www.mnb.hu](http://www.mnb.hu) (visited 12-05-2011)
- Moses, L. N. (1958), *Location and the Theory of Production*, Quarterly Journal of Economics, vol. 78: p. 259-272
- Municipality of Budapest (2004), *Podmaniczky Programme 2005-2013: Budapest's Medium-Term Development Programme*. Via [www.urbanisztika.bme.hu](http://www.urbanisztika.bme.hu), visited 21-05-2011
- Nagy, E. and Nagy, G. (2009), *Changing spaces of knowledge-based business services in Hungary*. In: Hungarian Geographical Bulletin, volume 58, issue 2, p. 101-120
- National Innovation Office (2011), *Péter Pázmány programme*. Via [www.nih.gov.hu](http://www.nih.gov.hu), visited 22-05-2011
- Nelson, R.R. & Winter S.G. (1982), *An Evolutionary Theory of Economic Change*. Cambridge MA and London: The Belknap Press.
- Nepligetcenter.hu (2010), *Ericsson moves to Nepliget Center*. Via [www.nepligetcenter.hu](http://www.nepligetcenter.hu), visited 25-06-2011
- Novak, C. (2011), *Cluster development in Hungary*. Presentation at WIRE 2011, June 8<sup>th</sup> 2011
- OECD (2000), *Reviews of Foreign Direct Investment: Hungary*. OECD Country Reviews Publication, Paris
- OECD (2001), *The New Economy: beyond the hype*. Final report on the OECD growth project. Paris
- OECD (2011), *Restoring Public Finances*, Special Issue of the *OECD Journal on Budgeting*, Volume 2011/2, OECD Publishing, Paris.
- Officiumiroda.hu (2011), *Officium Irodaház*. Via [www.officiumiroda.hu](http://www.officiumiroda.hu), visited 02-08-2011
- Oort, van F., Brussel, van J., Raspe, O., Burger, M., Dinteren, van J., Knaap, van der, B (2006), *Economische netwerken in de regio*. Ruimtelijk Planbureau, Den Haag
- Oosterhaven, J. (2003), *Syllabus Ruimtelijke Economie*. Vakgroep Algemene Economie, Rijksuniversiteit Groningen
- Pacek, N. (2011) *Hungary outlook: quarterly update April 2011*. Presentation of CEEMEA Business Group, April 2011
- Parr, J. B. (2002), *The location of economic activity: central place theory and the wider urban system*, P. McCann (Ed.) *Industrial Location Economics*, pp. 32-82. Cheltenham: Edward Elgar
- Pellenbarg, P.H. (1977), *Bedrijfsmigratie in Nederland*. Deel II Onderzoeksresultaten. Stichting Noord Holland-Noord, Industriecommissie Hollands Noordkwartier, en Geografisch Instituut Rijksuniversiteit Groningen.
- Pellenbarg, P.H. (1985), *Bedrijfsrelocatie en Ruimtelijke Kognitie*, Sociaal-geografische reeks no. 33, Rijksuniversiteit Groningen
- Pellenbarg, P.H. (2005), *Bedrijfsverplaatsing*. In: P.H. Pellenbarg, P.J.M. Van Steen, L.J.G. Van Wissen (red.) *Ruimtelijke aspecten van de bedrijvendynamiek in Nederland*. Assen: Van Gorcum, p. 101-125
- Pellenbarg, P. H. & Steen, van P. J. (1999), *The Dynamics of the International Economic and Demographic Exchange Relationships of The Netherlands*. TESSG, vol. 90, p. 441-447

- Pellenbarg, P.H. Van Wissen, L.J.G. and Van Dijk, J. (2002), *Firm relocation: state of the art and research prospects*. SOM Research Report 02D31, Groningen: University of Groningen
- Pen, C.J. (2002), Wat beweegt bedrijven. Besluitvormingsprocessen bij verplaatste bedrijven. Groningen, KNAG/FRW RUG: Netherlands Geographical Studies, 297
- Péter, E. (2010) ESTON International Property Advisors Consultant Research Division, *Author's interview*, held on 04-06-2010
- Pintér, D. (2009) (office leasing manager of Eston International Property Consulting Zrt.), *New trends in the domestic office market*. Interview with Topark.eu, via [www.topark.eu](http://www.topark.eu), visited 22-04-2010
- Plokker, K. J. (1999), Van Mělník tot Moskou: ondernemen in Midden- en Oost-Europa 10 jaar na de val van de Berlijnse Muur: ondernemers en deskundigen bespreken hun ervaringen. Amsterdam: Nicolaas Witsen Stichting
- Porter, M.E. (1990), *The Competitive Advantage of Nations*. London: Macmillan
- Portfolio.hu (2011), *New orders in Hungary's industry collapse – is this it for growth?* Via [www.portfolio.hu](http://www.portfolio.hu), visited 22-08-2011
- Pred, A. (1967), (1969), *Behavioural and Location Part 1 and 2*. Department of Geography, Lund
- PWC (2010), *Shared Service Centres: The 2<sup>nd</sup> Generation: has your Shared Service Centre reached its optimum stage of development? Hungary 2010*. Acquired by Mr. Borbély (CBRE), June 4<sup>th</sup>, 2010
- Radosevic, S. (2002), *Regional Innovation Systems in Central and Eastern Europe: Determinant, Organizers and Alignments*. Journal of Technology Transfer, vol. 27, p. 87–96.
- Realdeal.hu (2011), *Shell moving to Buda's Office Garden II*. Via [www.realdeal.hu](http://www.realdeal.hu), visited 02-08-2011
- Roach, S. (2004), *How global labour arbitrage will shape the world economy*. Via <http://ecocritique.free.fr/roachglo.pdf>, visited 01-06-2011
- Rugman, A. M. (1980), *A New Theory of Multinational Enterprise: Internationalization versus Internalization*. Columbia Journal of World Business, vol. 15, issue 2, p. 23-29
- Sass, M. (2008), *Offshore outsourcing in services: the case of Hungary, based on three company case studies*. Research report from an initial part of the project *What kind of competitiveness for the Visegrad 4 Four?* Via [www.thinktank.cz](http://www.thinktank.cz), visited on 22-04-2010
- Sass, M. (2010), *Foreign Direct Investments and Relocations in Business Services – What are the Locational Factors? The Case of Hungary*. Research paper for the project *What kind of competitiveness for the Visegrad 4 Four?* Pdf acquired via <http://eprints.ucm.es/10380/>
- Sassen, S. (2002), *Cities in a world economy*. In: S. Fainstein & S. Campbell (eds) 2nd edition, *Readings in Urban Theory*. Oxford: Blackwell
- Schäfer, R. (2006), *Job losses in Germany from investment in the new EU Member States?* Allianz Special Focus, Economy & Markets vol. 8 2006
- Schiller, R. (2001), *The Dynamics of property location*. London, New York: Spon Press
- Schumpeter, J.A. (1942), *Capitalism, Socialism and Democracy*. New York: Harper.
- Scott, A. J. (2000), *Economic Geography: The Great Half-Century*. Cambridge Journal of Economics, Oxford University Press, vol. 24(4), p. 483-504

- Simon, H. A. (1955), *A behavioural model of rational choice*, The Quarterly Journal of Economics, vol. 69, p. 99-118
- Skanska (2011), *Improving Prospects in an Increasingly Optimistic Budapest Office Market*. Via [www.skanska.hu](http://www.skanska.hu), visited 25-06-2011
- Sloterdijk, M. S., Van Steen, P. J. M. (1994), *Ruimtegebruik en ruimtelijk gedrag van ondernemingen: economisch-demografische bouwstenen: analyses op basis van het bedrijvenpanel*. University of Groningen, Faculty of Spatial Sciences
- Smidt, M. de, Wever, E. (1990), *The corporate firm in a changing world*. London: Routledge
- Stanowsky, J. (2007), *Central and eastern European demographics – that shrinking feeling!* Allianz Economic Research Working Paper 88: 18-06-2007. Dresden
- Steen, van P.J.M. (1998), *Bedrijvenlandschap 2000+: bedrijfsverplaatsingen en de vraag naar bedrijfslokaties in Nederland*. Groningen: Faculteit der Ruimtelijke Wetenschappen
- Steen, van P.J.M. (2005), *Bedrijvendynamiek onder het vergrootglas*. In: P.H. Pellenburg, P.J.M. Van Steen, L.J.G. Van Wissen (red.) *Ruimtelijke aspecten van de bedrijvendynamiek in Nederland*. Assen: Van Gorcum, p. 101-125
- Suhadja, A (2009), *Know how IT works: SSC, software and hardware development in Hungary*. In: HINT Magazine, vol. 1, 2009, via [www.investhungary.com](http://www.investhungary.com), visited 22-06-2010
- Szabó, P. (2010), *Regions, regional inequalities, regional policy in Europe*, lecture material, 17-03-2010
- Szalkai, G (2010) Eötvös University, Department of Regional Science Assistant Professor, *Author's interviews*, held on 11-05-2010 and 10-06-2010
- Szanyi M. (2001), *Privatization and greenfield FDI in the economic restructuring of Hungary*. In: UNCTAD (Dec. 2001), *Transnational Corporations*, vol. 10, no. 3, p. 25-38
- Szanyi M. (2003), *An FDI-based Development Model for Hungary, New Challenges?* Institute for World Economics, Hungarian Academy of Sciences, Working Paper 141, Budapest
- TÁRKI Joint Research Center (2005), *European Social Survey 2005. The comparative study of the European societies. Hungarian database*. Budapest: TÁRKI Social Research Institute Inc.
- Taşan-Kok, T. (2006), *Institutional and spatial change*. In: Tsenkova, S and Nedović-Budić, Z (eds), *The Urban Mosaic of Post-Socialist Europe*, Physica-Verlag HD
- Thünen, von J.H. (1826), *Der Isolierte Staat in Beziehung auf Landschaft und Nationalökonomie*. Hamburg: Puthes
- Tosics, I. (2005), *Post-socialist Budapest: the invasion of market forces and the response of public leadership*. In: F. E. Ian Hamilton, Kaliopa Dimitrovska Andrews and Natasa Pichler-Milanovic (eds.), *Transformation Of Cities In Central And Eastern Europe: Towards Globalization*. United Nations University Press, 2005. Part 2, Chapter 9, p. 248-280
- Tosics, I. (2006), *Spatial Restructuring in Post-socialist Budapest*. In: Tsenkova, S and Z. Nedovic-Budic (eds.) *The Urban Mosaic of Post-Socialist Europe: Space, Institutions, and Policy*, Heidelberg and New York: Physica-Verlag, p. 131-150.
- Turnock, D. (1998), *Globalisation and the East European Transition*. GeoJournal vol. 45, p. 129-140

- United Nations Conference on Trade and Development (UNCTAD) (1999), *The REIO exception in MFN treatment clauses*, UNCTAD Series on International Investment Policies for Development, New York and Geneva, United Nations publication
- UNCTAD (2001), *World Investment Report 2001: Promoting Linkages*. New York and Geneva: United Nations
- UNCTAD (2004), *World Investment Report 2004: The Shift Towards Services*. New York and Geneva: United Nations
- UNCTAD (2009), *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries*. New York and Geneva: United Nations
- UNCTAD (2010), *Investment policy monitor no. 2*, 20 April 2010, via [www.unctad.org/diae](http://www.unctad.org/diae), visited on 10-05-2010
- Vacigreens.hu (2011), *Váci Greens building "A" receives BREEAM Excellent certification*. Via [www.vacigreens.hu](http://www.vacigreens.hu), visited on 02-08-2011
- Vass, G. (2010) *Hi-tech in Hungary: potential and performance*. Presentation of the Hungarian Ministry for National Economy, China Hi-Tech Fair, Shenzhen, 16-21 Nov 2010
- Vernon, R. (1966). *International investment and international trade in the product life cycle*. Quarterly Journal of Economics, vol. 80, p. 190-207
- Visser, E-J. and Atzema, O. (2007), *Beyond clusters: Fostering innovation through a differentiated and combined network approach*. Papers in Evolutionary Economic Geography 0507, Utrecht University
- Weber, A. (1909), *Über den Standort der Industrie*, 1 Teil: reine Theorie des Standorts. Tübingen: Mohr
- Weber, A. (1929), *Theory of the Location of Industries*. Chicago: University of Chicago Press
- Wes, M. and Lankes, H.P. (2001), *FDI in economies in transition: M&A versus greenfield investment*. In: UNCTAD (Dec. 2001), *Transnational Corporations*, vol. 10, no. 3, p. 113-129
- Weterings, A., Dammers, E., Breedijk, M., Boschman, S. and Wijngaarden, P. (2009), *De waarde van de kantooromgeving. Effecten van omgevingskenmerken op de huurprijzen van kantoorpanden*. Publication from PBL Netherlands Environmental Assessment Agency, via [www.pbl.nl](http://www.pbl.nl), visited on 22-04-2010
- Williamson, O. E. (1985), *The Economic Institutions of Capitalism. Firms, Markets, Relational Contracting*. New York: Free Press
- WING (2010), *One of the largest office investment transactions of the recent year was completed*. Via [www.wing.hu](http://www.wing.hu), visited 22-04-2010
- Wissen, van L.J.G. (2002), *Demography of the Firm: A Useful Metaphor?* European Journal of Population, Springer Netherlands, vol. 18(3), p. 263-279
- World Bank (2009), *Business Environment Snapshot for Hungary*, via [www.rru.worldbank.org](http://www.rru.worldbank.org), visited on 22-06-2010
- Zimmerman, T. and Harzer, T. (2005), *Offshoring to Central and Eastern Europe*. Report by Roland Berger, via [www.rolandberger.com](http://www.rolandberger.com), visited 22-04-2010

# 10) Appendix A: The OLI-Paradigm as in Dunning & Lundan (2008)

## THE ECLECTIC (OLI) PARADIGM OF INTERNATIONAL PRODUCTION

### Ownership-specific Advantages (O) of an Enterprise of one Nationality (or Affiliates of Same) over Those of Another

- (a) *Property rights and/or intangible asset advantages (Oa)*  
The resource (asset) structure of the firm. Product innovations, production management, organisational and marketing systems, innovatory capacity, noncodifiable knowledge; accumulated experience in marketing, finance, etc. Ability to reduce costs of intra- and/or inter-firm transactions (also influenced by Oi).
- (b) *Advantages of common governance, that is, of organising Oa with complementary assets (Ot)*  
(i) Those that branch plants of established enterprises may enjoy over *de novo* firms. Those resulting mainly from size, product diversity and learning experiences of enterprise (e.g., economies of scope and specialisation). Exclusive or favoured access to inputs (e.g., labour, natural resources, finance, information). Ability to obtain inputs on favoured terms (e.g., as a result of size or monopsonistic influence). Ability of parent company to conclude productive and cooperative inter-firm relationships. Exclusive or favoured access to product markets.  
Access to resources of parent company at marginal cost. Synergistic economies (not only in production, but in purchasing, marketing, finance, etc. arrangements).  
(ii) Which specifically arise because of multinationality. Multinationality enhances operational flexibility by offering wider opportunities for arbitraging, production shifting and global sourcing of inputs. More favoured access to and/or better knowledge about international markets (e.g., for information, finance, labour, etc.). Ability to take advantage of geographic differences in factor endowments, government regulation, markets, etc. Ability to diversify or reduce risks. Ability to learn from societal differences in organisational and managerial processes and systems (also influenced by Oi).
- (c) *Institutional assets (Oj)*  
The formal and informal institutions that govern the value-added processes within the firm, and between the firm and its stakeholders. Codes of conduct, norms and corporate culture; incentive systems and appraisal; leadership and management of diversity.

### Location-specific Factors (L) (These May Favour Home or Host Countries)

- Spatial distribution of natural and created resource endowments and markets. Input prices, quality and productivity (e.g., labour, energy, materials, components, semifinished goods).
- International transport and communication costs.
- Investment incentives and disincentives (including performance requirements, etc.).
- Artificial barriers (e.g., import controls) to trade in goods and services.
- Infrastructure provisions (educational, transport and communication).
- Cross-country ideological, language, cultural, business, political differences.
- Economies of agglomeration and spillovers.
- Economic system and strategies of government; the institutional framework for resource allocation.
- Legal and regulatory system (e.g., protection of propriety rights, credible enforcement).

### Internalisation Advantages (I) (i.e., to Circumvent or Exploit Market Failure)

- To avoid search and negotiating costs.
- To avoid costs of moral hazard and adverse selection, and to protect the reputation of the internalising firm.
- To avoid cost of broken contracts and ensuing litigation.
- Buyer uncertainty about nature and value of inputs (e.g., of technology being sold).
- When market does not permit price discrimination.
- Need of seller to protect quality of intermediate or final products.
- To capture economies of interdependent activities (influenced by Oi).
- To compensate for the absence of future markets.
- To avoid or exploit government intervention (quotas, tariffs, price controls, tax differences, etc.).
- To control supplies and conditions of sale of inputs (including technology).
- To control market outlets (including those which might be used by competitors).
- To be able to engage in practices, such as cross-subsidisation, predatory pricing, leads and lags, and transfer pricing as a competitive (or anticompetitive) strategy.

Source: Dunning, J. H., Lundan, S.M. (2008), *Multinational enterprises and the global economy*, 2nd edition. Cheltenham: Edward Elgar

## Appendix B: Overview of Expert Interviews

May 11 <sup>th</sup> 2010 Gábor Szalkai	Eötvös University, Department of Regional Science Assistant Professor
May 19 <sup>th</sup> 2010 Márton Czirfusz	Centre for Regional Studies Hungarian Academy of Sciences Junior Research Fellow
May 27 <sup>th</sup> 2010 Csilla Endrődy	ITDH Hungarian investment and trade development agency Deputy Director Business Intelligence Unit, Investment Promotion Directorate
May 31 <sup>st</sup> 2010 Atilla Hopka*	King Sturge Hungary Agency consultant
June 2 <sup>nd</sup> 2010 Sarolta Csikós*	TriGranit Development Corporation Head of Office Leasing
June 3 <sup>rd</sup> 2010 Marcell Laczkó	TriGranit Development Corporation Sales Director
June 4 <sup>th</sup> 2010 Éva Péter	ESTON International Property Advisors Consultant Research Division
June 4 <sup>th</sup> 2010 Gergely Koó	EHL Real Estate Hungary Head of leasing
June 4 <sup>th</sup> 2010 Gábor Borbély	CB Richard Ellis Senior Analyst, Research and Consultancy
June 7 <sup>th</sup> 2010 Róbert Hajba	Graphisoft Park SE CFO and Investor Relations
June 10 <sup>th</sup> 2010 Gábor Szalkai	Eötvös University, Department of Regional Science Assistant Professor

\* = Interview done by telephone



## Appendix C: Interview set-up



rijksuniversiteit  
 groningen

faculteit ruimtelijke  
 wetenschappen



Budapest, May 10th 2010

Regarding: foreign firm location research

Dear Sir/ Madam,

As concluding part of my masters in Economic Geography at the University of Groningen, I am currently researching the establishment of foreign firms in Budapest.

The macro level movement of firms has been studied thoroughly over the years, which asks for the local situation to be explored. The approach of this research is to find out where foreign firms are located in Budapest, with special attention to the inflow of the foreign service sector, ICT and R&D firms. The research consists of two parts:

- Part one is focussed on the secondary data, which provides the theoretical basis of this research. Cooperation with ELTE Institute of Geography and Earth Sciences has been very productive in this scenario.
- Part two requires primary data, provided by interviews with the actors on the local Budapest market: foreign firms, real estate companies and the ITDH (the Hungarian investment and trade development agency).

For this matter I would like to ask your cooperation, since your insights are valuable in this research and provide the most recent view on the location preferences of foreign firms.

Is there an opportunity to have a small interview (approx. 20 minutes) to speak about the current location of the foreign firms, the reasons why they are at that location and the ways in which this location pattern can change in the future, based on your experiences in the market?

I am currently staying in Budapest; I am mobile and have a fully open agenda until the 15<sup>th</sup> of June.

Thank you very much for your time and possible cooperation. My contact information is provided below. You will also find my research set up and interview questions.

Yours sincerely,

Jelmer Dekker  
0031628190070

[firmresearch2010@gmail.com](mailto:firmresearch2010@gmail.com)

## RESEARCH SET UP

Part 1 of this research focuses on the international market side of the increasing globalising world, with outsourcing and relocation of production and services into countries with cheaper labour costs. From all the available information this picture is pretty much complete.

Part 2 of this research will focus on the local consequences of all the FDI inflow into Budapest.

From theory and empirical results there has been a strong shift towards the products and services with a highly added value. This shift requires a new approach towards the building of offices. Together with the increasing inflow of ICT, R&D, software companies and call centres there is an increased demand for office buildings.

I will try to point out what the current situation of the market is, where the most office buildings are, what prices are related to them and where are the newest development projects. Second, I will try to measure the subjective valuation of the office buildings + surrounding and the choices made for (speculative) development of particular office project on a particular location.

Please find the interview questions below.

## REAL ESTATE AGENCY/CONSULTANCY INTERVIEW

COMPANY:

### **History**

*As the market shifted from an industrial based economy towards a service sector based one, the need for the types of buildings changed. Together with the ITC, R&D and software industries settling down in Budapest the demand for office buildings strongly increased.*

1)

What were the main reasons and opportunities of establishing and investing in Hungary/Budapest?

2)

What did you experience from the shift from industrial towards a service based economy?

### **Current**

*The situation nowadays on the office market is to focus on the existing tenant. Foreign firms are increasingly eager to re-invest and the FDI in Budapest is decreasing. New locations are prestigious buildings and locations like Science, Innovation and Technology Parks.*

3)

In what part of the settlement process of the foreign firm are you involved? How is the relation with the ITDH in this matter?

4)

As most foreign firms want to relocate within 6 months, there is need for speculative office development. How big is the share of foreign FDI expectations in this speculation, and how much of the office market is rented by and provided towards foreign firms?

5)

What (f)actors and preferences determine the location of the speculative office development?

6)

How is the cooperation with districts and the Budapest municipality? How is the necessary land acquired?

7)

What factors cause your company to decide to represent or participate with a developer?

### **Future**

*The office market got hit hard by the crisis and there is more need to focus on the demand side and design accordingly. There is also an increased interest in Green building, an increasing vacancy rate, problems with maintenance and there is fear of price wars.*

8)

What further trends are visible in the future office building development? How can the Budapest office market stay a FDI attraction? How dependent on FDI is it?

9)

Can or will the Greenfield certification influence the location choice of a new (greener) office building?

10)

What is your expectation about Shared Service Centres, Science, Info and Business parks?

11)

How strong is the focus on the non-central Buda and Pest? How will the CBD develop? What other parts of Budapest are potential office hubs?

# Appendix D: SSC+BPO+ITO database

NAME	TYPE	CODE	ADDRESS	CITY	DISTRICT	BUILDING	YEAR	STAFF*	SOURCE
General Motors	CEE Regional Office	2040	Szabadság út 117	Budaörs	-	OCRO Business Park	2002	640	CBRE
BAT	Financial centre	2040	Fuskás Tivadar utca 5	Budaörs	-	-	2004	-	mfa.gov.hu
Roche	Service Centre	2040	Edison Utca 1	Budaörs	-	Terrapark	2006	-	ITDH Presentation
Ablemaile	Centre of Excellence Shared Service Centre	1133	Váci Ut 76	Budapest	13	Capital One Square building	2010	130	ITDH website
Accenture	Service Centre	1088	Rákóczi út 1-3	Budapest	7	East West Business Center	2001	130	ITDH website
Air France-KLM	Service Centre	1088	Rákóczi út 1-3	Budapest	7	East West Business Center	2006	-	ITDH Presentation
Avaya	Global Technical Service centre	1062	Váci Ut 1-3	Budapest	13	WestEnd City Center	2003	-	mfa.gov.hu
Avis Europe	Finance Shared Service Centre	1134	Dévai utca 26-28	Budapest	13	ECB Devai center	2003	150	CBRE
Bosch	Sales and Development Centre	1103	Gyömrői út 120	Budapest	10	Own building	1992	500	mfa.gov.hu
BP	Business Service Centre	1035	Soroksári út 30-34	Budapest	9	Haller Garden	2009	1400	ITDH website
BT Global Services	IT Services + HQ	1117	Budaöksi út 91-93	Budapest	11	IP West office	2001	700	ITDH, SASS
Celanese	Business Services Centre	1134	Váci út 33	Budapest	13	Váci 33	2007	200	ITDH Presentation
Cemex	Shared Service Centre	1027	Kapás út 6-12.	Budapest	2	Viziváros Office Centre	2005	-	ITDH Presentation
Cisco Europe	Regional Technical Assistance Centre	1123	Csörsz utca 45	Budapest	12	MOM Park	1995	50-500	ITDH website
Citygroup	Shared Service Centre	1087	Hungária körút 40	Budapest	8	Arena Corner Office Centre	2005	302	CBRE
Cognizant	Global Delivery centre + HQ	1087	Hungária körút 41	Budapest	8	Arena Corner Office Centre	2007	-	CBRE
Convergys	European Service Centre	1113	Bocskai út 134-146	Budapest	11	Dorottya Udvar	2006	300	CBRE
Corning	Financial Shared Services Centre in Budapest	1117	Budaöksi út 91-93	Budapest	11	IP West office	2006	50	ITDH Presentation
DHL	Support Center	1097	Fehérvári út 22	Budapest	9	Own building	2004	80-100	Company website
Diageo	European Shared Service Centre	1132	Váci út 20-26	Budapest	13	West End Business Centre	2001	700	CBRE
EDS (HP)	Global Service Centre	1114	Bartók Béla út 43-47	Budapest	11	Bartók Ház	1991	-	CBRE
EDS (HP)	Regional Management Centre	1138	Váci Ut 163	Budapest	13	Metrotech	1991	1700	CBRE
Ericsson	R&D Centre	1117	Irinyi József utca 4-20	Budapest	13	Science Park	2004	450	ITDH website
Erste Bank	Call centre and Operation centre	1138	Váci út 135-139	Budapest	13	BSR Centre	1998	-	ITDH Presentation
EuronMobil	Business Support centre	1139	Váci út 81-85	Budapest	13	Center Point	2003	1200	CBRE
FAO	SSC, Regional Office for Europe and Central Asia	1068	Benczur utca 34	Budapest	6	Benczur utca 34	2007	86-120	ITDH Presentation
Fletronics	Global Service Centre	1183	Hangár utca 5-37	Budapest	10	Own Building	1993	1500	ITDH, Reg SC
GE (General Electric)	Regional Service Centre	1134	Dévai utca 26-28	Budapest	13	ECB Devai center	2002	600	Kajinger
Genpact	Shared Service Centre	1138	Váci Ut 178	Budapest	13	Duna Plaza	2002	700	ITDH Presentation
Getronics	Getronics Service Center	1027	Henger utca 2	Budapest	3	Margit Palace	2004	510	CBRE
Grundfos	Financial Shared Services Centre	1062	Teréz körút 55-57	Budapest	6	Eiffel Square	2010	34	BBR
HP	Finance & Accounting Services Centre	1114	Bartók Béla Ut 43-47	Budapest	11	Bartók Ház	1996	-	ITDH Presentation
IBM	International Shared Service Centre	1092	Közteltek utca 6	Budapest	9	City Gate	1998	1400	CBRE
IBM	Global Financing	1138	Népfürdő utca 22	Budapest	13	Duna Tower	2007	-	ITDH Presentation
InBev	Business Services Centre	1138	Népfürdő utca 22	Budapest	13	Duna Tower	2006	380	ITDH, SASS
ING Europe	European regional trade&data processing centre	1068	Dózsa György út 84	Budapest	6	Atrium Park	1991	250	Kajinger
Kinetic Concept (KC)	Shared Service Centre	1133	Váci Ut 76	Budapest	13	Capital One Square building	2010	100	Company website
KPMG	Tax Compliance Centre	1139	Váci Ut 99	Budapest	13	BC 99	2010	50	KPMG
Leamark	European Competence Centre	1095	Lechner Ödön fasor 8	Budapest	9	Millennium Tower II	2008	130	ITDH Presentation
Lufthansa	Operation Centre	1123	Alkotás utca 53	Budapest	12	MOM Park	2008	100	ITDH Report
Microsoft	Software Service Centre	1031	Záhony utca 7	Budapest	3	Graphisoft Park	2004	200-300	ITDH Report
Morgan Stanley	business and technology centre	1095	Lechner Ödön fasor 8	Budapest	9	Millennium Tower III	2006	600	CBRE
Nalco	Shared Service Centre	1139	Váci Ut 81-83	Budapest	13	Centre Point	2006	114	ITDH Presentation
NCR	Global Services Centre	1117	Fehérvári út 79	Budapest	11	Del-Buda centre	2007	130	ITDH Presentation
Nokia	Regional HQ shared services center	1093	Czuczor utca 2	Budapest	9	Stadium Office Building	2008	600	ITDH Presentation
Nokia Siemens Network	Global Centre	1092	Közteltek utca 6	Budapest	9	City Gate	1998	800	Company website
Nuance-Recognita	R&D Centre	1138	Váci Ut 141	Budapest	13	Danubius Houses	2000	-	Company website
Oracle	CEE Competency Centre	1095	Lechner Ödön fasor 7	Budapest	9	Millennium Tower II	2003	-	Company website
Philips	R&D Centre	1117	Alf utca 1	Budapest	11	Office Garden	-	-	mfa.gov.hu
SAP	R&D and SW Development Centre	1031	Záhony utca 7	Budapest	3	Graphisoft Park	2005	600	CBRE
Satyam	Global Development Centre	1117	Neumann János utca 1/C	Budapest	11	InfoPark	2006	60	ITDH website
Siemens (Sgsdata)	IT Solutions and Services	1143	Gizella út 61-57	Budapest	11	Own building	2000	600	Company website
Sykes	Call Centre	1117	Fehérvári út 79	Budapest	11	Del-Buda centre	1999	1000	CBRE
Sykes	Call Centre	1116	Hauszmann Alajos utca 3	Budapest	11	BHG Office Building	1999	-	CBRE
Tata	European R&D Centre	1117	Irinyi József utca 4-20	Budapest	13	Science Park	2001	1000	CBRE
Transcom	headquarter shared service centre	1117	Budaöksi út 91-93	Budapest	11	IP West office	2004	500	ITDH Presentation
T-Systems (IT Services)	Service Centre	1117	Neumann János utca 1/C	Budapest	11	InfoPark	2006	1750	ITDH, SASS
UNHCR	Global Service Centre	1022	Felvinci út 27	Budapest	2	Own building	2007	100	ITDH Presentation
Yngvis	Global Service Centre	1062	Váci Ut 1-3	Budapest	13	WestEnd City Center	2006	400	ITDH Presentation
Vodafone	European Shared Service/Financing Centre	1087	Hungária körút 42	Budapest	8	Arena Corner Office Centre	2007	1000	CBRE
GE Budapest Bank	Finance & Business Service	5600	Munkácsy utca 3	Békéscsaba	-	-	2007	750	ITDH, SASS
BT Global Services	IT Services	4024	Vár utca 3	Debrecen	-	-	2007	-	ITDH, SASS
The Gem	Service Centre	4030	Vagohid utca 2	Debrecen	-	-	2007	-	ITDH Presentation
T-Systems	Service Centre	4031	Vezér utca	Debrecen	-	Tudáspark	2006	-	ITDH, SASS
SEI	customer support centre	4025	Erzsébet utca 48	Debrecen	-	-	2003	-	ITDH Presentation
National Instruments	Manufacturing+Services	4031	Határ út 1	Debrecen	-	-	2006	-	ITDH Presentation
Vodafone	customer service centre	3527	Arany János utca 1	Miskolc	-	-	2009	-	ITDH Presentation
Sykes	Regional Call Centre	3525	Kis-Hungad utca 9	Miskolc	-	-	1999	-	ITDH Presentation
EDS (HP)	BPO Shared Services Center	3525	-	Miskolc	-	-	1991	-	ITDH Presentation
BUW	Customer Care Center	7621	Rákóczi út 60	Pécs	-	-	2006	100	ITDH Presentation
EDS (HP)	BPO Shared Services Center	9777	-	Rábadivég	-	-	1991	-	ITDH Presentation
Magyar Telecom	Shared Service Centre	6720	Kisfaludy utca 18	Szeged	-	-	-	270	KPMG
Emerson	Service Centre	8000	Beréngi út 100	Székesfehérvár	-	-	-	50	BBJ
Alcoa	Regional financial and bank-office centre	8000	Verscei utca 1-15	Székesfehérvár	-	-	2001	150	Kajinger
Sapa	Shared Service Centre	8000	Verscei utca 1-15	Székesfehérvár	-	-	2009	-	ITDH Presentation
Visteon	BPO	8000	Asztrológiai ut 9-11	Székesfehérvár	-	-	2005	-	ITDH Presentation
IBM	IT BPO/ Global Services	8000	Beréngi Ut 72-100	Székesfehérvár	-	Videoton Industrial Park, B	2007	-	ITDH Presentation
EDS (HP)	BPO Shared Services Center	9970	-	Szentgotthárd	-	Szentgotthárd Industrial Pa	1991	-	ITDH Presentation
Jabil	Service Centre	9700	Vasarter utca 1-3	Szombathely	-	-	-	719	ITDH, SASS
EDS (HP)	BPO Shared Services Center	9800	Bartók Béla utca 1	Vasvár	-	-	1991	-	ITDH Presentation

\* already accounted for, when companies have more than one location in Hungary

\*\* rough estimate of actual or planned number of jobs based on company websites and other sources

## References

- BBJ (2010), Business section, Via [www.bbj.hu](http://www.bbj.hu)
- BBR (2010), 7,000 sq m office space leased at Eiffel Square Office Building, Via [www.bbr.hu](http://www.bbr.hu), visited 22-05-2011
- CBRE office data from Mr. Borbély, 2010
- DTZ CEE (2007), BPO in the CEE region, Via [www.dtz.hu](http://www.dtz.hu), visited 20-04-2010
- ITDH (2008), Anchoring global business in Hungary, Via [www.itdh.com](http://www.itdh.com), visited 26-05-2010
- ITDH (2010), Shared Service Centres in Hungary, Presentation by the ITDH, provided by C. Endrödy
- HBI Company Data Hungary (2010) Via [www.hbi.hu](http://www.hbi.hu), visited 20-04-2010
- Kajinger, E. (2006), ICT-enabled outsourcing and offshoring activities in Hungary, Presentation at DECD WPIE Meeting, June 9th 2006, Paris
- Ministry of Foreign Affairs (2006), Call Centers in Hungary, Via [www.mfa.gov.hu](http://www.mfa.gov.hu), visited on 20-04-2010
- Sass, M. (2010), Foreign Direct Investments and Relocations in Business Services – What are the Locational Factors? The Case of Hungary, Research paper for the project What kind of competitiveness for the Visegrad 4 Four? Pdf acquired via <http://eprints.uom.es/10380/>
- Various company websites

## Appendix E: Public transport accessibility in minutes from respectively Nyugati Station, Soroksári út (Haller Gardens) and Árpád hid (Váci Út)

