

# Managerial decision-making on the location of banking headquarters in the Czech Republic



Jan Sucháček<sup>1\*</sup> – Jolana Skaličková<sup>2</sup> – Jan Široký<sup>1</sup>

<sup>1</sup> VŠB-Technical University of Ostrava, Faculty of Economics, Czech Republic

\* Corresponding author. Email: [jan.suchacek@vsb.cz](mailto:jan.suchacek@vsb.cz)

<sup>2</sup> Moravian University College Olomouc, Czech Republic

**Abstract:** Location decision-making constitutes one of pivotal tasks for banking managements, which applies to both banking headquarters and affiliates. The main objective of this article consists in analysis and interpretation of location factors that stay behind location-decision making of banking managements and subsequent collocation of banking head offices in the Czech Republic. In doing so, cluster analysis was utilised appropriately and it turned out, initial 18 location factors can be decreased to final three mutually similar groups, which satisfactorily embody location criteria banking managements take into account. As it has been proven banking landscape in the Czech Republic is still influenced by traditional hard factors of location, nonetheless their soft counterparts should be increasingly considered.

**Key words:** Banking managements, banking sector, location decisions, banking headquarters, Czech Republic.

## Highlights for public administration, management and planning:

- Physical location of banking headquarters is still of primary importance and location factors should be monitored carefully.
- Rising importance of soft location factors in the post-transformation countries may be expected.

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## 1. Introduction

Every economy can be characterised by a specific spatial configuration. Large cities represent important nodes in the framework of these economies. Contemporary sharp interurban competition brought a new pressure on particular urban managements (Ježek 2011).

They strive to attract various target groups including new investors, tourists or students as well as many others. Banks represent one of the most relevant target groups in this context and it concerns both banking headquarters as well as branches. It can be stated that geographical distribution of banking headquarters embodies spatially strongly differentiated economic power. This is the natural reflection of the fact that banks constitute one of the most relevant entities within the economy and seats of their manage-

ments where pivotal decisions take place, should be monitored thoroughly (see also Bassens & van Meeteren 2015; Cohen, 1998; Karreman 2009; Porteous 1995; Pike & Pollard 2010 or Alessandrini et al. 2005).

The main objective of this paper is to analyse and interpret location factors that affect location-decision making of banking managements and subsequent collocation of banking head offices in the Czech Republic.

In this article, we strive for the application of less frequent approach towards the analysis of banking institutions, which is however indispensable for the indication of geographical differentiation of financial-economic power on the one hand and for the qualified and data-driven location decision-making of banking managements on the other.

## 2. Spatial-Managerial View on Banking Sector and Banking Institutions

Banks can be generally perceived as the hubs of the geography of finance. Taking deposits and granting credits that embody principal functions of the banks bear a distinct spatial dimension even within single countries. Put succinctly, flows of finance are based on particular decisions of banking managements, which are located in individual cities. Undoubtedly, managers placed in banking headquarters play a cardinal role in that context (see also [Vanhove & Klaasen 1987](#); [Corbridge et al. 1994](#); [Martin & Minns 1995](#); [Karreman 2009](#); [Alessandrini et al. 2005](#); [Bassens & van Meeteren 2015](#); [Pike & Pollard 2010](#) or [Sokol 2011](#)).

This implies that geography of finance is of crucial importance and space and place matter for financial transactions and allocations (see also [Corbridge et al. 1994](#); [Martin & Minns 1995](#); [Karreman 2009](#); [Cohen 1998](#); [Pike & Pollard 2010](#); [Dow 1999](#); [Leyshon & Thrift 1997](#); [Lee et al. 1997](#); [Sass & Fífeková 2011](#); [Taylor & Csomos 2012](#) or [Bassens & van Meeteren 2015](#)).

[Semple \(1985\)](#) introduced quaternary place concept concentrating on strong interconnectedness of banks with other producer services. [Porteous \(1995\)](#) underlines the importance of face-to-face contacts, concomitant to actors living in large metropolitan areas. This, in turn, leads to the depression of transactions costs.

Contrary to that, actors living in more remote territories are often disadvantaged geographically, socio-culturally as well as in terms of transaction costs as shown by [Sucháček \(2012\)](#). [Gál \(2004\)](#) claims peripheral regions are endangered by financial exclusion.

Strong spatial concentration of banks has been confirmed by numerous authors including [Semple \(1985\)](#), [Porteous \(1995\)](#) or [Gál \(2004\)](#). As confirmed by [Krugman \(1991\)](#), cumulative mechanisms supporting geographical concentration of banking head offices are distinctively prevailing. Not surprisingly, banking sector is concentrated more than other branches of the economy ([Gál 2004](#)).

Nonetheless, one should take into consideration that the above mentioned conceptions explaining the location of banks are applicable mostly

in advanced leading economies. The situation in banking sector in Central East Europe (where the Czech Republic can be ranked) is strongly affected by recent intense transformations of these economies (see [Hlaváček 2013](#); [Lux 2008](#); [Sucháček et al. 2017](#) or [Sucháček et al. 2016](#)).

Thus, in the Czech Republic as well as other Central East European economies that get through post-transition stage of its development the applicability of conceptions concentrating on the spatial patterns of banking institutions will be partly constrained. This naturally affects also location decision-making on banking headquarters adopted by respective banking managements.

## 3. Applied Methods

The whole research has been executed through questionnaire survey including 20 questions in total. The research was largely of qualitative character. Basic sample was composed of 24 commercial banks with head offices in the Czech Republic. Data gathering was accomplished by means of electronic and telephone questioning. Respondents were represented by the members of top or middle managements in individual banks.

At the beginning, all banks were addressed by means of e-mail. In case of no response, respective managers were contacted via telephone when the purpose of the whole research was explained to them. In case of their approval they finally received the questionnaire via e-mail. At the end, 21 banks joined the research and the rate of return thus reached satisfactory value 87.5%.

For the purposes of our research, structured questionnaire turned out appropriate. We utilized Likert scale ranging from -3 to +3. The higher value, the higher intensity of the examined phenomenon. While -3 marks utter disagreement, +3 denotes complete agreement and 0 is a neutral medium value. This scale was applied in the major part of questions. Further interesting and specific information that facilitated the completion of the whole research were obtained by means of open questions within our questionnaire. Our attention concentrated mainly on the issues with high

frequency of occurrence, but we regarded also other information gained within this research.

Data were further processed and analysed by Microsoft Excel and SPSS 21, software for mathematical and statistical calculations.

Generally speaking, cluster analysis, which is utilised also in this article, is based on the division of objects. The purpose of cluster analysis consists in the maximisation of the resemblance of objects in the framework of individual clusters and concurrently maximisation of mutual dissimilarity among individual clusters. Cluster analysis leads to the decrease of the number of objects. Final amount of objects is smaller than original amount of objects (see also Řezanková 2006 or Hendl 2012). In our article we strived for the application of hierarchical cluster analysis. The result is the construction of a hierarchy, or dendrogram (treelike structure), depicting the formation of the cluster (see also Hair et al. 2010).

Distances in the framework of hierarchical cluster analysis can be quantified in different ways. In this paper, Euclidean measure was applied, which is expressible in the following way:

$$\text{distance}(x, y) = \sum_{i=1}^n (x_i - y_i)^2, \quad (1)$$

where  $x(x_1, x_2, \dots, x_n)$  and  $y(y_1, y_2, \dots, y_n)$  are multivariate objects.

In this article, Ward's linkage method was applied. Ward's linkage method minimizes the sum of squares of any two theoretical clusters, which can be generated at every step of clustering (Ward 1963). Generally speaking, Ward's method is treated as rather efficient and taking into account the size of data sample, we are entitled to utilize it. In that way, we will get the optimal number of clusters, which will be further interpreted.

Last but not least, we should be aware of natural spatio-temporal constraints of this research and that is why its results should be treated with high degree of caution. The problem of the location of banking headquarters is very lively and its variability and versatility do not enable us to draw any larger general conclusions. Interestin-

gly, rather small amount of research has been done on that topic so far, which creates sufficient space for added value of the paper as well as future researches.

#### 4. Results

Location decision-making related to the head offices of respective banks is one of fundamental tasks for banking managements. Location factors that matter are synthetically depicted in Table 1.

**Table 1 – Statistical Description of Location Factors for Banking Headquarters**

Location factor	Mean	Mode	% Mode
Geographic location	1.86	3	43
Infrastructure	1.76	3	38
Quality of entrepreneurial milieu	1.33	2	43
Quality of local workforce	1.14	2	24
Proximity of decisive authorities	0.86	0	33
Availability/quantity of workforce	0.76	3	38
Image/prestige of the place	0.71	2	38
Closeness of similar firms/financial services	0.52	0	43
Public administration system	0.43	0	48
Land price	0.14	1	33
Proximity to competitors	0.10	0	33
National policies	0.05	0	43
Agglomeration advantages	-0.29	0	38
Willingness of managers to move	-0.81	0	33
Low wage requirements	-0.90	0	33
Quality of environment	-1.05	0	38
Cultural facilities	-1.29	-3	43
Sport facilities	-1.38	-3	38

As it can be derived from Table 1, the most important location factors influencing the collocation of banking headquarters are

geographical location and infrastructure. On the above mentioned Likert scale, the value '3' means the highest intensity of the phenomenon concerned and as it can be seen, 43% of questioned managers assessed the location factor 'geographical position' just by that value and 38% of respondents evaluated the next location factor called 'infrastructure' in the same manner.

Large values can be found also in case of mean evaluation of the quality of entrepreneurial environment and quality of local labour. The most frequented value was '2' in both cases,

which also signifies rather large relevance of both location factors for banking managements in the Czech Republic.

Contrary to that, sport and cultural amenities, quality of environment, low wage requirements, willingness of managers to move and agglomeration advantages can be found at the bottom of the hierarchy of location factors determining the collocation of banking headquarters in the country. In case of cultural and sport facilities, the most frequented value in the frame of Likert scale was '3'.

**Table 2 – Clustering Schedule**

Stage	Clusters Combined		Coefficients	Stage, at which Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	1	2	0.005	0	0	12
2	3	12	0.063	0	0	7
3	10	15	0.178	0	0	10
4	7	8	0.329	0	0	16
5	11	16	0.487	0	0	8
6	5	14	0.670	0	0	11
7	3	9	0.896	2	0	12
8	11	17	1.271	5	0	9
9	11	18	2.025	8	0	13
10	10	13	2.888	3	0	13
11	5	6	3.825	6	0	14
12	1	3	5.780	1	7	15
13	10	11	7.996	10	9	14
14	5	10	10.980	11	13	16
15	1	4	14.949	12	0	17
16	5	7	33.625	14	4	17
17	1	5	78.658	15	16	0

This is in consonance with previous studies evaluating the location preferences of largest enterprises (see for instance Sucháček 2015). In a real life, these soft location factors, such as sport or cultural amenities, are actually perceived rather intensely. Managers, who answered the questions in the framework of our questionnaire, considered their loyalty to the employers and tended to accentuate rather hard factors directly influencing the economy of banks. In that way, questioned managers indirectly declared their fidelity to their banks.

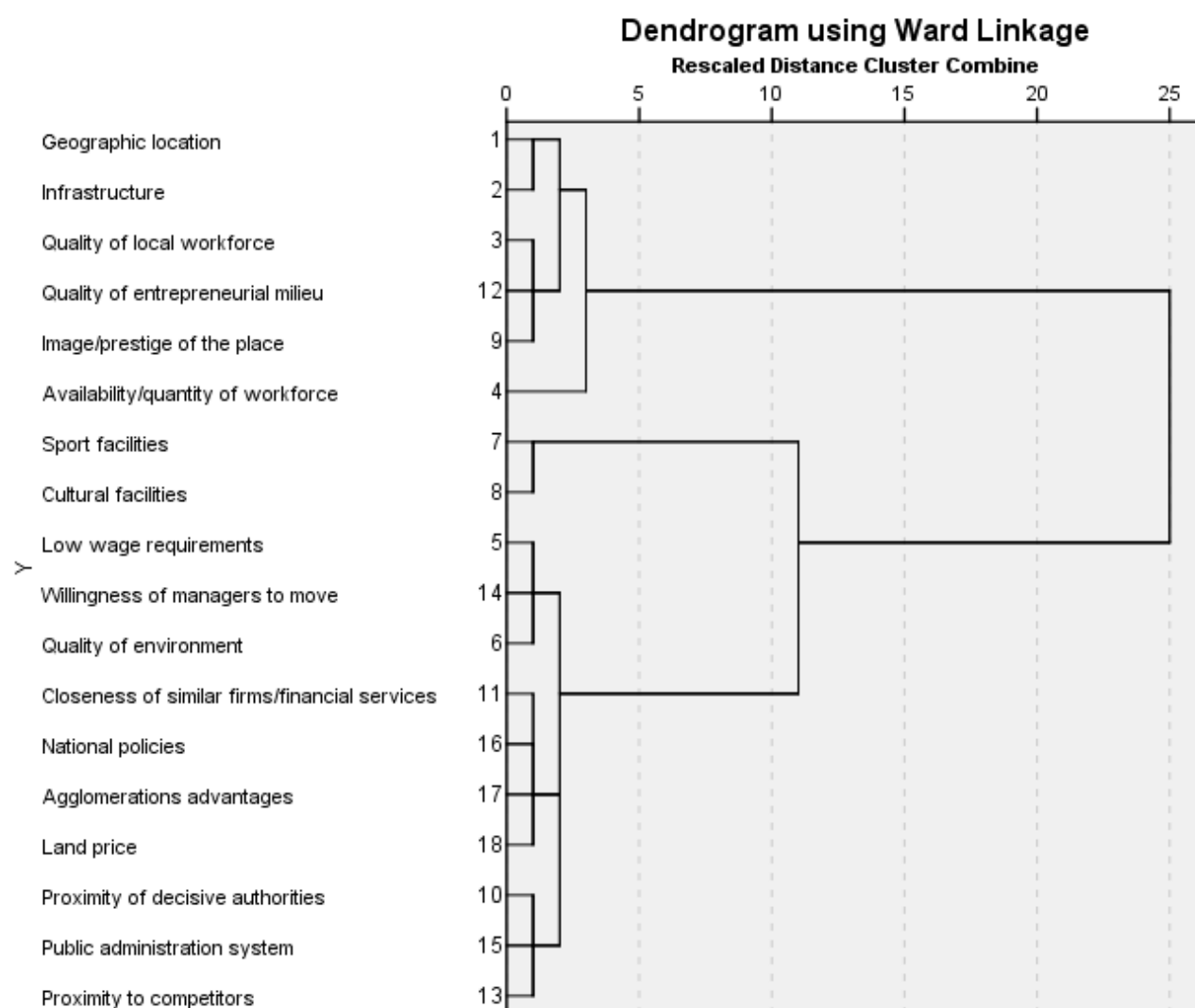
As mentioned, in order to reduce the number of location factors, cluster analysis has been used. Factor analysis could not be applied just for the sake of the low value of Kaiser-Meyer-Olkin measure of sampling adequacy that reached 0.402. Table 2 provides us with some important information on the cluster analysis performed by the authors and shows how the factors are joined at each stage of the cluster analysis. Fig. 1 represents a dendrogram showing similarities between localization factors.

This agglomeration table presents the results of individual rounds of hierarchical cluster analysis.

The first column of the table shows the amount of stages or rounds of clustering, when in the last stage the analysed objects are connected into one cluster. The column denoted as 'clusters combined' shows the number of clusters or the

numbers of objects that were combined in individual steps.

Coefficients represent the values of significant distances for the combination of clusters.



**Fig. 1 – Dendrogram for banking headquarters**

On the basis of the development of these coefficients we determine the optimal amount of clusters. The process of connection progresses until the moment in time, when all the factors are joined in one large cluster, which is represented by the line 17. The sudden change of coefficients,

which is between lines 15 and 16, represents the solution in the form of three formed clusters.

Initial group of 18 location factors was on the basis of cluster analysis dissolved into three clusters. And as it turned out, these clusters can be labelled satisfactorily:

- (a) Geographical location, infrastructure, quality of local workforce, quality of entrepreneurial environment, image/prestige of the place, availability/quantity of workforce – wider geographical factors and human resources.
- (b) Low wage requirements, willingness of managers to move, quality of environment, closeness of similar firms/financial services, national policies, agglomeration advantages, land price, proximity of decisive authorities, public administration system and proximity to competitors – place-specific characteristics and political framework.
- (c) Cultural facilities and sport facilities – leisure amenities.

It is worth noticing that while cluster a) includes 6 items or location factors and b) comprises 10 original location factors, cluster c) is composed of mere two items. It should be stated, however, that clustering finds its rationale in our case and 3 clusters express the characteristics of location factors in a satisfactory manner. Naturally, this is useful also from the perspective of location-decision making banking managements are in charge.

## 5. Discussion and Conclusions

Banking managements perform different functions and tasks, of which location decision-making remains one of the most important ones. Our research disclosed that traditional hard location factors are still of primary importance in the process of collocation of banking head offices in the Czech Republic. It concerns mainly geographic location and infrastructure that seem to be considered most intensely by respective banking managements.

On the contrary, some location factors were revealed as less important. This holds true for sport and cultural amenities, quality of environment, low wage requirements, willingness of managers to move and agglomeration advantages. Average assessment of these location factors in the framework of our questionnaire reached negative values.

The position of cultural and sport facilities looks surprising. This phenomenon can be accounted for by less sincere attitude of the respondents of our questionnaire survey. In reality, these managers do take care of sport and cultural amenities but since these categories do not directly influence economic results of banks, they received only marginal attention. In that way, questioned managers indirectly declared their fidelity to the bank in question.

Cluster analysis turned out to be enormously useful for the purposes of our research and paper. We were able to create 3 clusters that rather satisfactorily characterise relevant attributes of individual factors of location. These clusters were named as follows: wider geographical factors and human resources, place-specific characteristics and political framework and leisure amenities.

If we compare the outcomes of our research with similar studies accomplished abroad, it is apparent that transformation processes in the country influenced also the spatial distribution of banking headquarters. Changes in the location of these headquarters represent one of spatial manifestations of intense transformation of financial and banking sector that took place in the framework of the abandonment of central planning and move to the market-based resource allocation. Similar trends – either more centripetal, such as in Hungary or more polycentric, which was the case of Poland, could be contemplated also in other Central East European countries (Stryjakiewicz & Potrzebowski 1996; or Gál 2004).

It should be stated specific institutional heritage and strong socioeconomic path-dependency in the Czech Republic that distinctively affected geographical distribution of banking headquarters in the country, are accompanied by rather homogenous settlement system. This settlement structure, which due to its long-term evolution and quite a great inertia embodies the natural developmental premises of individual territories, represents a specific supply side for the location of banking head offices. However, the geographical pattern of banking seats in the country is much more concentrated.



As confirmed by previous researches (Sucháček 2016), the capital city occupies exclusive position in terms of banking headquarters in the country. The main advantages of the city were identified by our respondents as follows: proximity of clients, nearness of central institutions and the prestige of the capital city. Other towns conceivable as the seats of banking head offices were Brno (seven times), Ostrava (four times) and Plzeň (once). The main motives for the possible collocation of banking head offices to these towns were relatively cheap and qualified labour. No other towns in the Czech Republic that could possibly act as hosts of banking headquarters, were mentioned.

This is not in consonance with spatial distribution of banking head offices in advanced economies, which evolved over long periods of time and generally tend to follow settlement systems of respective countries as well as agglomeration economies. Naturally, size of individual economies should be taken into consideration too (see also Bassens & van Meeteren 2015; Cohen 1998; Corbridge et al. 1994; Karreman 1999; Sokol 2011 or Dow 1999).

There are several recommendations that can be derived from our findings and apply to both public administration and banking managements:

- In spite of rising electronisation and internetisation of banking, physical location is still of primary importance. It includes both tangible, e.g. economic and intangible, e.g. image or prestige components. Thus, it represents an inseparable part of banking management and related location factors should be monitored carefully.
- Advanced countries enjoy sui generis ubiquitous hard location factors and concentrate nowadays rather on their soft counterparts. Post-transformation economies still find themselves qualitatively one step behind and focus on hard location factors rather than their soft peers so far. This implies rising importance of soft location factors in the future as the territories post-transformation countries occupy are getting increasingly standardised in terms of physical infrastructure.

- As mentioned, banking managements can imagine their headquarters only in three other towns out of the capital city. This implies that these towns as well as other large towns should concentrate on the cultivation of both hard and soft factors of location in order to draw on the needs of sustainable socio-economic development.

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