STRATEGIC MANAGEMENT OF THE PORTFOLIO OF URBAN REAL ESTATE: RESEARCH OF THE CURRENT SCIENTIFIC KNOWLEDGE

LUCIA DOBRUCKÁ*, MARTIN MAŠTÁLKA, VLADIMÍRA ŠILHÁNKOVÁ

Czech Technical University in Prague, Masaryk Institute of Advanced Studies, Kolejní 2637/2a, 160 00 Prague 6 - Dejvice, Czech Republic
* corresponding author: lucia.dobrucka@cvut.cz

Abstract. Municipalities possess a wide range of real estate. However, land, buildings, and premises must not only be managed individually, but also optimized and strategically developed as a comprehensive portfolio linked to the objectives of public administration activities and, of course, to the development plans of a particular municipality. Nevertheless, a comprehensive view of the issue of managing and building a real estate portfolio in public administration is missing. This is evidenced by the lack of a methodology that would help local authorities with the task. Thus, a quantitative analysis of scientific publications was conducted, dealing with the issue of strategic management of real estate portfolios at the city level, both within the Czech Republic and throughout the world. This article aims to present a qualitative search of the content of scientific publications, thereby contributing to the creation of a foundation for further systematic research into this issue.

Keywords: Asset management, real estate portfolio, public property management, property management, new public governance.

1. INTRODUCTION

Cities own the portfolios of diverse real estate properties that need to be not only managed on a daily basis (facility management, property management) but also strategically optimized and developed. However, Czech cities lack methodological guidelines on how to do so. Their approaches tend to be intuitive, out-of-date, and fragmented among various municipal departments. Furthermore, cities often lack professional knowledge of the field, internationally shared best practices, and a persistent focus on efficiency. Therefore, the authors searched the global scientific literature and, in this article, present preliminary results on the strategic management of city-owned real estate portfolios.

During the initial research, it became apparent that the topic had been neglected to such an extent that there was not even a clear understanding of the current state of knowledge on this issue, from which future research and related proposals of practical modern solutions could be developed. Based on the quantitative analysis, the objective was therefore to create a qualitative search of scientific publications that deal with the issue of strategic management of the portfolio of real estate owned by the public administration at the city level. For this purpose, a qualitative analysis of scientific outputs contained in selected databases identified in the first step will be used.

The article is divided into two parts. The first part presents a quantitative overview of the scientific literature, which was conducted in the first half of March 2023. Regarding methodology, the authors first searched the catalogues of the Czech National Library – the Complex Catalogue and the Online Catalogue [1][2] – which contain all publications with an ISBN or ISSN issued and/or available in the Czech Republic. Here, authors searched for various combinations of keywords “nemovitosti” [real estate], “portfolio” [portfolio], “strategie” [strategy], “management” [management], “město/obec” [city/municipality], and “veřejné” [public]. Second, Scopus’s database [3] was chosen to seek global scientific knowledge on the topic. The two main reasons to prefer Scopus over Web of Science [4] were that Scopus collected more texts (e.g., the term “real estate management” yielded 5366 results in Scopus and only 3494 results in Web of Science), and that Scopus included 12 journals and 96 books concerning real estate that were not indexed in Web of Science. In Scopus, authors searched publications with the words “real estate”, “public administration”, “public sector”, “planning”, and/or “urban/city” in their titles. Most of the results were journals, books, and conferences. Within these, the authors searched for combinations of keywords such as “real estate”, “asset”, “portfolio”, “strategy”, “management”, “city”, “municipality”, “public”, and “public authority property management”.

Finally, the authors selected abstracts of texts that implied at least three of the requested words (those were considered the most promising). Together, 386 abstracts were read and evaluated based on their relevance to the research topic – the strategic management of real estate portfolios owned by cities. The second part of the article presents the content analysis of 386 abstracts. As a result, only 52 abstracts were
connected to the topic and only 24 looked to focus on it directly. Attempts were made to download these 24 as full texts for further examination. This search was carried out in spring 2023.

Finally, the authors selected abstracts of texts that implied at least three of the requested words (those were considered the most promising). Together, 386 abstracts were read and evaluated based on their relevance to the research topic – the strategic management of real estate portfolios owned by cities. The second part of the article presents the content analysis of 386 abstracts. As a result, only 52 abstracts were connected to the topic and only 24 looked to focus on it directly. Attempts were made to download these 24 as full texts for further examination. This search was carried out in spring 2023.

2. Quantitative overview of the scientific literature

2.1. Czech National Library

The authors searched the catalogues of the Czech National Library, the Complex catalogue, and the Online catalogue, which hold all publications with an ISBN or ISSN issued and/or available in the Czech Republic. Here, authors searched for combinations of keywords “nemovitosti” [real estate], “portfolio” [portfolio], “strategie” [strategy], “management” [management], “město/obec” [city/municipality], and “veřejné” [public].

In the Complex catalogue (publications issued in the Czech Republic), the keyword “nemovitosti” [real estate] pointed to 3,251 results (69% in the Czech language). However, the combination of keywords led to much lower results. The combination of “nemovitosti” [real estate] and “management” [management] resulted in 16 texts, and the combination of “nemovitosti” [real estate] and “strategie” [strategy] brought 9 texts. No other combination was found (zero texts) in the first catalogue. In the Online catalogue (publications available in the Czech Republic), authors found the triple-combination of “nemovitosti” [real estate], “management” [management], and “strategie” [strategy], which pointed to 17 texts (all of them in the Czech language). However, after reading the abstracts of the texts found, the authors excluded all of them from further reading. None of the texts issued/available in the Czech Republic focused on the strategic management of real estate portfolios owned by cities. Only eight texts deal with the topic of facility management.

2.2. Scopus

The Scopus database was chosen to search for global scientific knowledge on the topic. As already noted, the main reasons to prefer Scopus over Web of Science were that Scopus contains more texts and that Scopus contained 12 journals and 96 books concerning real estate, which were not indexed in Web of Science. In Scopus, authors searched:

(a) publications that included the words “real estate”, “public administration”, “public sector”, “planning”, and/or “urban/city” in their title, and

(b) combinations of the keywords “real estate”, “asset”, “portfolio”, “strategy”, “management”, “city”, “municipality”, “public”, and “public authority property management”.

The authors selected abstracts of texts that contained at least three of the requested keywords, as those were considered the most promising. The following text presents the key findings. More details about the quantitative search can be found in [5].

Altogether, 9,492 texts belong to sources that had “real estate” in their source title (12 journals and 98 books). The oldest text comes from 2003, which might explain why no results were found in Web of Science. Most of the texts originated from the United States (4,008 texts), China (2,089 texts), and Asian countries in general. In Central Europe, most of the texts originate in Poland (2,418 texts). The largest number of texts belonged to the categories of “business, management, and accounting” and “economics, econometrics, and finance”. The “social sciences” covered about a third of the texts. The triple combination of searched keywords (“portfolio”, “strategy/management”, and “city/public”) limited the number of texts to 31 altogether (unique texts after excluding dualities), and none of which were from the Czech Republic.

Sources with “public administration” or “public sector” in their source title (47 journals and 353 books) contained a total of 32,411 texts. In this category, most of the articles originated in the United States (10,683 texts), the UK (3,983 texts), and Australia (2,225 texts). In Central Europe, most texts come from Lithuania (381); however, most of those texts are written in the national language (and were thus incomprehensible). More than 90% of the texts belonged to the category of “social sciences”, followed by “business, management, and accounting” and “environmental sciences”. Triple combinations (keywords “real estate/assets”, “portfolio” and “strategy/management”) led to only two results, none of which were from the Czech Republic. Therefore, a double combination of words was checked as well.

Most of the results – 244,576 texts – were found in sources with “planning”, “urban”, or “city” in the title (160 journals and 5,566 books). The primary regional origin was the United States (72,818 texts); nevertheless, the second place belongs to “undefined” (38,113 texts). This fact might mean that a large percentage of texts deal with international (or beyond-national) and/or generally applicable topics. In Central Europe, most of the texts originate in Poland (1,510 texts). Approximately 65% of the texts belonged to “social sciences”. The next categories were “environmental science” and “engineering”. However, similar to the
case above, the triple combinations (keywords “real estate/assets/building”, “strategy/management” and “portfolio”) led to only 20 results, none of which were from the Czech Republic. Due to the large number of texts, the double-combination was checked too.

Following the three searches described above and comparing the weight of individual words (how often they pointed to relevant abstracts), the more holistic term “public authority property management” seemed to be the most appropriate way of conducting the control search. In Scopus, this term brought 649 results, which were then reduced to the categories of “social sciences”, “business, management, and accounting” and “economics, econometrics, and finance”. After this reduction, 299 texts (books, articles, and conference papers) remained.

As the last step in this chapter, the results were combined and brought 398 abstracts that could be relevant for further reading. Notably, there was almost no overlap between the original three searches and the control search. This suggests two alternatives: The research topic did not have any consistency in keywords (pointing to the wide internal heterogeneity of the topic), or the chosen methodology was incorrect. Taking this limitation into consideration, the authors proceeded to content analysis.

For the purpose of the study, it was necessary to define the differences between the terms used:

- **Facility Management**: This integrates multiple disciplines in order to have an influence on the efficiency and productivity of economies of societies, communities, and organizations, as well as the manner in which individuals interact with the built environment. Facility management affects the health, well-being, and quality of life of much of the world’s societies and population through the services it manages and delivers [6].

- **Asset Management**: Asset management is the day-to-day running of a wealth portfolio. It is usually headed by an investment manager. The management of assets involves building a portfolio of investments. This includes assessing risks, finding opportunities, and developing an overarching strategy for reaching a set of financial objectives [7].

- **Real Estate Property Management**: Property management is the daily oversight of residential, commercial, or industrial real estate by a third-party contractor. Generally, property managers take responsibility for day-to-day repairs and the ongoing maintenance, security, and upkeep of properties. They usually work for the owners of investment properties such as apartment and condominium complexes, private home communities, shopping centres, and industrial parks. Their main roles are to manage routine tasks delegated to them by the owners and to preserve the value of the properties that they manage while generating income [8].

### 3. Analysis of the Selected Scientific Literature

#### 3.1. Abstracts

As mentioned above, 386 abstracts were considered potentially relevant to the research topic – the strategic management of real estate portfolios owned by cities. When reading these abstracts, the authors focused on the research topic, as well as generally on the spread of topics that could be found in those abstracts (based on the combination of keywords, as explained above). The authors acknowledge that this part is vulnerable to the subjective opinion of the authors. To avoid bias as much as possible, the authors read the abstracts individually, cross-compared their individual evaluations, and resolved any commonly discussed disagreements.

The range of topics covered by the abstracts is extensive. They deal with investment strategies on real estate markets [9–10], systems and methods [11–13], performance measurements and valuations [13–14], the impact of actors and/or participation [14–15], the role of fund managers [16] land ownership and management [17–20], the relationship between business and finance [21–24], the control function of state institutions and/or legislation [25–28], and many other aspects. In addition, the abstracts suggest that only a very small number of texts handle municipal real estate assets as one holistic portfolio. Researchers tend to prefer individual buildings [29] or sub-portfolios composed of the same type, such as the housing sector [30], office market [9], public utilities [31], heritage [32] etc.

No commonalities were discovered that would link abstracts from the perspective of keywords, geographical location, time frame, or any other feature. Nevertheless, the authors recognized some hints that framed the relevance of the used keywords and the choices of full texts to be read:

- The journals with “real estate” in their source title were about private investors. The very limited number of articles pointed to the public sector.
- The word “public” in real estate journals pointed almost exclusively to private companies dealing with publicly traded shares.
- The word “property” in journals that focus on public administration primarily refer to authorships and ownership rights.
- “Asset management” in the public sector often resulted in articles in investment funds, especially pension funds.

#### 3.2. Full Texts

After reading the 386 abstracts, the authors selected 52 abstracts that were related to the topic, while only 24 of them focused directly on the strategic management of real estate portfolios owned by cities. Subsequently, the researchers attempted to read these 24 texts and focused on four evaluation questions.
(1.) Does the text deal with how to manage the portfolio of municipally owned real estate properties?

(2.) Does the text describe methods and tools for managing such a portfolio?

(3.) Does the text evaluate methods which were used to manage such a portfolio?

(4.) Does the text consider what is the “optimal portfolio” of municipally owned real estate properties?

The four questions were evaluated on a scale of: 0 (not at all), 1 (there are some notes), 2 (there are significant notes), and 3 (it is the main focus).

The Table 1 shows if and how the 24 selected full-texts (which were considered the most relevant according to their abstracts) deal with the four questions. A surprisingly high number of texts (8 texts) were not accessible through authors’ standard Scopus accounts. Authors could not access three books (Deakin [33]; Manase [28]; Pekdemir [10]) and two chapters in Deakin’s book (Deakin [31]; Dent [11]). Also, authors had to exclude 3 book chapters (French and Hague [15]; Hatch [27]; Hatch [33]) as well as one article (Byrne [24]) from this article due to their inaccessibility. The article by Ignjatovic [36] was written in the Croatian language, and the authors did not manage to read it.

As for the 13 full texts that were considered the most relevant and accessible, most of them acknowledged some relevance to the real estate portfolio and the methods/tools for how to manage it; nevertheless, their relevance was surprisingly low (scores 1 or 2 in more than one question). Only three texts achieved high scores (2 or 3 in more than one question): Coram and Burnes [35]; Phelps [11] and Uotila, Saari, and Junnonen [19]. Two texts were somewhat relevant to the four questions: Lind and Lindqvist [12], and Pallis and Pallis [41]. One text did not focus on the public domain but was considered inspiring – Canelas [21] addressed mixed-functional portfolios owned by landlords in London. Three more texts referred to municipal property in terms of one building rather than a complex portfolio. This situation suggests that there is a real gap in the scientific literature on the strategic management of real estate portfolios owned by cities.

On the other hand, almost all of the full texts examined referred to new literature which should have satisfied the searched keywords (due to their titles, keywords, and topics, as described in Section 2); however, these were not found during the search. This fact points to either incorrect searching methodology or the failure of Scopus to present all relevant texts. Further details about the research topic can be found below.

Only a few texts addressed the question of what an optimal portfolio of real estate is from the perspective of cities. Phelps [11] provided eight dimensions of the optimized portfolio, which could help to fulfill organizational objectives and increase the quality of life of citizens:

- cost (reducing the costs of owning and occupying property releases resources for other purposes),
- condition (property in good condition provides a safe environment for users and promotes a positive image),
- value (property has value which can be released [through disposal] to support corporate objectives),
- income (property can be viewed as a “productive asset” capable of generating income to offset running costs),
- sufficiency (property of sufficient capacity is necessary to allow services to be provided at the required standard),
- utilization (under-used capacity results in excessive running costs, which deprives services of scarce resources),
- functional suitability (a building of the right type in the right location acts as a stimulus to effective service delivery),
- and client satisfaction (a building that is liked by occupants and visitors is likely to be well used and will meet its service intentions).

Phelps [11] did not describe any particular method to set up a real estate portfolio, but explored various approaches adopted by 12 councils in the UK. He examined the link between why UK councils carried out property management or asset management, how they did it, and what the results were. Phelps [11] stressed the difference between property management and asset management. Understanding that difference and shifting to asset management seemed crucial to applying a long-term perspective on how to deal with real estate portfolios. At the same time, however, this understanding was determined by a more innovative, corporate-like, and entrepreneurial organizational culture allied with strong leadership. Based on the 12 case studies, Phelps [11] identified key change factors such as strategic focus (vision), organizational commitment (including leadership), organizational culture (based on entrepreneurial approach), and portfolio intelligence (its adequate size and knowledge about it).

Coram and Burns [35] examined one particular major form of organizational change which continues to have a large impact on the public sector: privatization. The article examines the privatization of the Property Services Agency (PSA) to draw lessons on how the public sector can and should manage change. Although it is a highly informative and instructive example of criticism of privatization, the article addresses the question of how to perform property management and certainly does not recommend privatization of property management; ultimately, the article does not deal with how the administration of portfolio “management” should take place in order to achieve optimal management or what the optimal portfolio should be.
### Table 1. Overview of the availability of 24 selected texts and their relevance to the topic.

<table>
<thead>
<tr>
<th>Citation</th>
<th>Note</th>
<th>City portfolio management?</th>
<th>Public sector</th>
<th>Private sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Arkesteijn and Volker [37]</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2 Byrne [24]</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Caneias [21]</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>4 Coram and Burnes [28]</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5 Danylink and Dmytryshyn [29]</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6 Deakin [33]</td>
<td>book</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Deakin [34]</td>
<td>N/A chapter in Deakin 2019a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Dent [13]</td>
<td>N/A chapter in Deakin 2019a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Dmytryshyn [17]</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10 French and Hague [15]</td>
<td>N/A chapter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Gammas [39]</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12 Hatch (2015) [27]</td>
<td>N/A chapter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Hatch and Manuel [35]</td>
<td>N/A chapter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Higgins [10]</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15 Ignjatovic [36]</td>
<td>N/A Croatian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 Ladu [18]</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Lind and Lindqvist [12]</td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>18 Mattaricci and Pekdemir [10]</td>
<td>N/A book</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Ngwira and Manase [23]</td>
<td>N/A book</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Pallis and Pallis [11]</td>
<td></td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>22 Sayce and Connellan [13]</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>23 Shaw [22]</td>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>24 Uotila, Saari, and Junnonen [19]</td>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Scale: 0 (not at all), 1 (there are some notes), 2 (there are significant notes), 3 (it is the main focus).
The article by Uotila, Saari, and Junnonen [19] describes the case study detailing the participation of citizens and stakeholders in the public-school campus process in southern Finland. The process was incorporated into the facility and real estate portfolio management framework.

Canelas [21] investigated how London landlords managed their real estate portfolios. Although landlords are private subjects, their portfolios cover large neighbourhoods and offer commercial and public functions. Therefore, the curatorial form of placemaking adopted by many cluster managers – which involves actively “selecting the mix of uses and users, unit placement, and investing in public space to increase footfall, customer circulation, dwell time, and spending” (p. 232) – could be inspiring for municipalities too. More detailed practices included tight control over leases, the establishment of a retail environment on the ground levels (economy), office/residential units on upper floors (social mix), a judicious combination of well-known and unknown brands, and other strategies. Public space, its quality, and permeability are considered one of the most crucial aspects for success.

From the examined articles, it is still worth mentioning Danyliuk and Dmytryshyn [29] and the follow-up research of Dmytryshyn [17], which did not deal with municipal real-estate portfolios. However, their research could be useful for Czech municipalities that have brownfields and other unused buildings/areas in their portfolios. Danyliuk and Dmytryshyn [29], and Dmytryshyn [17] offer a methodology (based on community planning) and a set of 50 indicators from diverse perspectives (interior, exterior, environmental, historical and cultural, and financial) to help municipalities decide how to handle abandoned properties.

4. CONCLUSIONS

As preliminary investigations have shown [5] the issue of the optimal management of real estate portfolios at the city level has been relatively neglected by the scientific community. The aim of this article was therefore to create a qualitative analysis of scientific publications dealing with the issue of the strategic management of the portfolio of real estate owned by public administration at the city level, based on a quantitative analysis, and to create a foundation for further research into this issue and a basis for proposing practical, modern solutions.

During the initial research (using the online databases of the National Library of the Czech Republic [11], SKC – Union Catalogue of the Czech Republic [2], Web of Science [4], and Scopus [3]), it was found that the topic had been largely neglected. No relevant scientific literature was found in the context of the Czech Republic, and a search of the Scopus database showed that this issue was neglected internationally, and with some exceptions [12], it did not find a clear state of current knowledge on this issue. Within the quantitative analysis, 398 abstracts were found: publications that had been published in a thematic journal and contained at least three keywords when searched or searched through the term “public authority property management” and reduced focus. Of these, only 52 texts (articles, books, and conference papers) were connected to the topic, of which only 24 outputs related directly to the researched issue. None of the findings concern the strategic management of real estate portfolios owned by cities in the Czech Republic. Furthermore, the findings did not demonstrate any common points in terms of keywords, territorial affiliation, or time limits. This topic appears to be neglected, thus making it pertinent for systematic scientific considerations and research.

Of the 24 selected relevant texts, eight were unavailable, so an in-depth analysis of the texts could only be conducted for 16 of them. Among the unavailable sources, there were also three books that dealt directly with the issue of property at the municipal level: Deakin [33], Ngwira and Manase [23], and Mattarocci and Pekdemir [10]. As part of further investigation, these books must be procured and analyzed in detail. Finally, 15 texts were examined in depth (one of 16 was in Croatian, so the team was unable to read it). Only three texts – Coram and Burns [35]: Phelps [11], and Uotila, Saari, and Junnonen [19] – were evaluated with high relevance to the monitored topic. Two texts were somewhat relevant to the proposed four research questions: Lind and Lindqvist [12] and Pallis and Pallis [41]. One text did not focus on the public domain but was deemed inspiring – Canelas [21], which addressed mixed functional portfolios owned by landlords in London. Three more texts referred to municipal property in terms of one building rather than a complex portfolio.

Given the overall low number of relevant and available texts, this indicates a lack of anchoring of the examined issue. Despite the doubts expressed in the methodological part, this situation suggests that there is a real gap in the scientific literature dealing with the strategic management of city-owned real estate portfolios. Based on the analyses carried out, it can be asserted that no common point in the form of key themes, territorial, or time limits is evident in the examined texts. The only exceptions are book publications from the beginning of the second decade of the 20th century in the USA, which are inaccessible to researchers or cannot be obtained through the usual scientific sources. It can therefore be said that, on a global scale, there are very few publications on the issue of strategic management of the portfolio of public real estate at the city level and that this issue is not comprehensive. However, as the analysis showed, there are real estate management strategies and practices in the private sector, such as integrated management, integrated project financing, land development, PPP projects, portfolio strategies, etc. [10] 35 45. Although these are not easily trans-
ferable to our public sector, given that the context of public administration in the Czech Republic has its own history and its own specifics, they can serve as a source of inspiration on how to set up and manage a portfolio of real estate owned by cities so that this procedure meets current requirements and simultaneously reflects the uniqueness of the Czech public administration.

REFERENCES


