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# Ranking of Office-lease Options by Multi-criteria Methods

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## Abstract

Due to the growing scales of business and internationalisation, the issue of the office lease is becoming more and more relevant for companies [1, 2]. They are becoming an inherent part of business, on which the results of the commercial activity depend. Current methodologies for the assessment of the office-lease options are imperfect as they lack complexity; they are not associated with the objective of the lease, i.e. the improvement of business results; the methods of the quantitative assessment of lease options are far from perfect. The paper aims to formulate the hierarchical indicator system of commercial real estate facilities (offices) adjusted to the multi-criteria assessment and to calculate lease options based on this indicator system. To achieve this goal, the following methods have been used: scientific literature analysis and multi-criteria assessment methods.

*Keywords:* lease of commercial facilities (offices); forming the indicator system; multi-criteria assessment methods

## 1. Introduction

The business trend analysis shows that the gradually increasing demand for offices derives from both internal and external needs. The former appear where the companies establish their affiliates and subsidiaries expand their business in new areas, want to improve the office environment and focus their activities on one space. The external demand is the need of foreign companies which invest in the country for offices. The global investors which are currently optimising their business are more and more interested in the Middle Europe and Baltic States and they are gradually turning away from India and Asian countries. Consequently, the demand for offices will continue to grow.

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Recently, the office has been considered an important factor affecting the business results. Therefore, the premises for rent are subject to more stringent requirements in connection with technical characteristics, quality and variety of offered services, working environment, etc. [3–5, 15]. Consequently, the potential tenant, when selecting the premises, considers the aggregate of criteria covering various aspects such as prestige of the office location, exterior, interior, area, ergonomic solutions, simplicity in terms of finding directions, etc. rather than several basic criteria.

In this case, the office lease options are defined by multiple various indicators. Phenomena manifesting through various aspects in the reality are attributed to complicated and complex ones. Such phenomena may only be recognized when assessing all criteria reflecting such phenomena as a whole. It is there where the criteria-based approach, as a phenomenon, of the office lease comes from. The multi-criteria methods are most eligible for the assessment thereof.

## 2. Formation of the Indicator System of Office Lease Option

The essential stage of the multi-criteria assessment is the formation of the indicator system of the phenomenon in question. This is because the adequacy of reflecting the phenomenon in question largely depends on its completeness and structure. When forming such a system, the following statements are usually referred to [6–8]: first, the more indicators are included in the system, the more thoroughly the phenomenon in question is reflected, and vice versa, the fewer indicators are included in the system, the greater a threat that the significant indicators will not be assessed and the assessment of the status of the phenomenon in question will seem inadequate; second, the more indicators are included in the system, the more indicators will be difficult to formalise; moreover, the system will become complicated and it will be hard to accurately determine weights of the indicators, which will result in higher calculation costs and lower accuracy.

The formation of the indicator system starts with the list compilation. The objective of formation of the system itself is adequate reflection of the phenomenon in question and its adjustment for the multi-criteria assessment. The content and result of this process depend on how many indicators are included in the system. Where there are a few indicators, the single-level indicator system is formed (Fig. 1).
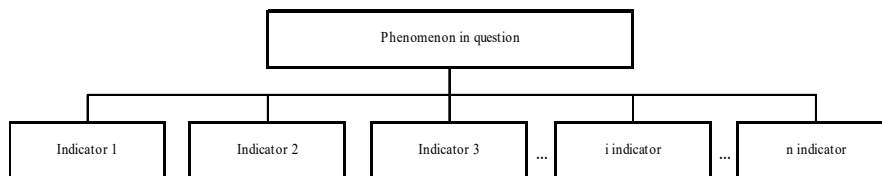


Fig. 1. Single-level indicator system.

The use of such an indicator system for the multi-criteria assessment of the complicated complex phenomena is quite limited as in this case it is subject to an intractable issue related to the indicator significance determination. This means that the experts may quite accurately assess the weights of a limited number of indicators only. The proposed complicated approaches to determine the significance of indicators do not fully resolve this problem as well [9]. According to the references, without greater evidence, however, this number equals 10-12 [10]. When looking for a solution, it is necessary to find a method enabling to reduce the number of simultaneously assessed indicators. This problem may be resolved by means of the indicator system hierarchical structuring which enables reducing the number of simultaneously assessed indicators to the preferred number [10–12].

Based on this methodology, the following hierarchically structured system of indicators of the office lease options was formed (Fig. 1). It consists of 51 indicators; all of them are divided into three blocks by affinity – economic, environmental, and premises [13]. The number of indicators in some of the main blocks (environmental and buildings) appeared to be too high in terms of the weight assessment; therefore, again based on the principles of affinity, they were divided into several parts: block of environmental indicators – into infrastructure and location, buildings – into the level of technical layout, atmosphere and options (Fig. 2).