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ABSTRACT

**Method of designing in corporate finance
management in the Republic of Poland**

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I. GENERAL DESCRIPTION OF THE WORK

1. Relevance and Significance of the Dissertation Research Topic

The researcher's interest in the problem of the design method stems from the author's personal responsibilities arising from their professional activities. The position held by the author required them to perform tasks using a methodology derived from the design method. In the course of daily duties, the researcher observed the relationship between effective management, the use of design tools, and financial performance. Delving into the structure of the organization, they sought to identify patterns that determine which factors contribute to profit maximization and effective management.

Previous studies did not reflect the researcher's intention and willingness to explore the problem. The construction industry is an extremely complex field for research analysis. The fragmented structures, where the organization's headquarters is in a different location than the construction site, and the close contact with higher-level decision-makers create additional challenges.

Despite some fluctuations, restrictions, and downtimes during events that began in early 2021 and impacted the entire construction industry, construction firms are currently on an upward trend. The pandemic period significantly affected the global economy, including the construction industry, which saw a significant decline in orders and their execution, leading to a deterioration in the financial condition of the entire sector.

However, despite these fluctuations and the uncertainty of the environment in which construction firms operate, the current trend shows signs of improvement, proving the sector's gradual recovery.

The market economy is characterized by increasing competition and the complexity of economic processes. Gaining a competitive advantage leads to changes in decision-making systems, providing management with faster, more reliable, and higher-quality information. Undoubtedly, such information results from analysis conducted in accordance with economic assumptions and based on reliable financial reporting. Businesses and enterprises have never existed and will never exist merely for the sake of existence. They must meet the numerous expectations of owners, contractors, and employees. To achieve these goals, firms formulate operational strategies that include the primary objective—enhancing the value of business activities. To this end, they use information about the external environment of the firm and financial reporting.

A characteristic feature of the construction industry is its exceptional sensitivity to economic fluctuations and changes in the macroeconomic and political-legal environment. The specific nature of the construction sector results in high variability in the financial condition of entities operating within it (general contractors, subcontractors, material manufacturers, and wholesalers). This affects how banking and insurance institutions, which provide construction firms with access to guarantees and external financing, assess the entire industry.

The two main functions of market institutions are marketing and innovation. Their implementation is necessary to ensure the survival of the firm in the market. A particularly important trend in this field is the creation of improvements aligned with sustainable development. For many market institutions, sustainable development defines the direction of economic, political, social, and environmental activities. The World Commission on Environment and Development, also known as the Brundtland Commission, defines it as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable development also sets trends in architecture and design. The construction industry is one of the key sectors in improving society's quality of life. Estimates suggest that it accounts for approximately 40% of energy consumption, 30% of carbon dioxide emissions, and 40% of solid waste production.

Technological advancement, receptiveness to innovation, the high development potential of the construction sector, and increased public awareness have driven the adoption of measures aimed at implementing sustainable development concepts. Responsible design is based on reducing or completely preventing the depletion of key resources, including energy, water, land, and raw materials, which helps prevent environmental degradation through infrastructure construction throughout its life cycle. These activities contribute to creating conditions where people live comfortably, safely, and productively. Thus, the concept of sustainable construction is a way to better adapt construction activities, processes, and practices from an economic, social, and environmental perspective.

Considering the concept of balanced construction, one must not forget about the balance in enterprise management, all accompanying aspects, and indicator determinants that show how efficient an enterprise is from a production perspective. Nevertheless, one of the most crucial issues is the symbiosis between enterprise management as a project and its efficiency and supporting indicators.

2. Research Subject and Objectives

The diagnosed research problem is followed by the characterization of the subject and essence of the study, which, in turn, forms the basis for further conceptual work. The researcher's main interest was the design method and its impact on effective business management. Thus, the researcher gathered information on whether effective methods or a group of methods exist in enterprise management and whether they can be reflected in financial indicators.

The identification of the research problem, along with a comprehensive analysis of research materials, confirmed that the researcher's activities address a significant cognitive gap in the field. Analyzed studies did not reveal substantial references to management aspects, design methods, or financial indicators.

Main Objective: Identify internal company factors that determine management efficiency when using the design method.

Specific objectives (related to specific hypotheses) are as follows:

1. Selecting the optimal management method in a construction firm.
2. Defining the distribution channels of the measurement tool to optimize empirical research.
3. Indicating organizational competencies necessary for effective project management.
4. Main Hypothesis of the Author

Based on these observations and reflections, the author formulated the main hypothesis: The design method, enriched with additional management methods, contributes to increasing the efficiency of management activities in a construction organization.

Detailed Hypotheses:

1. The use of financial ratios is sufficient for effective management of a construction organization.
2. The optimization of empirical research compels the researcher to use the research triangulation method.
3. Management competencies are essential for effective enterprise management.

6. Research Limitations

During the study, the author encountered numerous difficulties of both personal and institutional nature. Due to the formation of a large research sample and the creation of an original model for selecting enterprises that meet the study's validity criteria, the author underestimated the time required for the research.

1. Personal (researcher's):
 - Lack of external assistance (i.e., a team), making it difficult to contact organizations and conduct research personally.
 - Time constraint: The author's initial estimate was approximately 18-21 weeks, but the study ultimately took 36 weeks.
 - Financial constraints: While some research was conducted online, qualitative studies required in-person visits, leading to transportation costs and time expenditures.
2. Institutional:
 - Large enterprises were not always willing to provide management-related information.
 - There was an issue of information noise, where scheduled meetings were sometimes canceled due to lack of information from lower-level employees.
3. Behavioral:
 - Large organizations were not always willing to respond to the survey.
 - During in-depth interviews, several firms refused to continue the meeting.

- The most significant limitation was obtaining financial data that could be subjected to comparative analysis.

The above limitations significantly influenced the research duration and the entire preparatory process. Proper selection and recruitment played a key role.

II. STRUCTURE AND SCOPE OF WORK

The dissertation consists of 189 pages, including the title page, table of contents, three chapters, conclusion and findings, bibliography, and a list of tables and figures.

The chapters are divided into subchapters and are thematically interconnected. The first chapter consists of eleven subchapters, the second of eight subchapters, and the third of five subchapters.

The bibliography comprises a total of 196 references, including 195 monographs—91 titles in Polish and 104 in foreign languages—as well as research studies and scientific articles. There is also one netography reference. The work contains 2 tables and 40 figures.

In her dissertation, the researcher employed the following structure, consisting of three chapters: theoretical, methodological, and empirical. Each chapter is subdivided into subchapters.

The first, theoretical chapter consists of 11 subchapters spanning 97 pages, where the author conducted theoretical discussions on management aspects, the conceptual theory of the project method, project manager competencies, and competencies in the management process. The author also defined the financial indicators of the project.

The second chapter consists of 8 subchapters over 11 pages. This section includes the research concept in accordance with the research process, encompassing the formulation of research objectives and hypotheses, methods and measurement tools, and research results.

In the third chapter, the researcher described the results and conclusions of both quantitative and qualitative research and proposed the use of project method tools alongside identifying effective financial indicators. This chapter consists of 5 subchapters and spans 57 pages.

The dissertation consists of 195 pages, including the title page, table of contents, three chapters, conclusion and findings, bibliography, and a list of tables and figures.

The chapters are divided into subchapters and are thematically connected. The first chapter contains six subchapters, the second also contains six subchapters, and the third contains five subchapters.

The bibliography consists of 197 references, including 196 monographs, research studies, and scientific articles, as well as one netography reference. The work contains 2 tables and 40 figures.

In his doctoral dissertation, the researcher used the following structure, consisting of three chapters: theoretical-methodological, analytical-practical, and empirical. Each chapter is divided into subchapters.

The first, theoretical-methodological chapter consists of 6 subchapters spanning 82 pages, in which the author conducted theoretical discussions on management aspects, the conceptual theory of the design method, project manager competencies, and competencies in the management process. The author also defined the financial indicators of the project.

The second chapter consists of 6 subchapters over 13 pages. This section includes the research concept in accordance with the research process, from defining the research problem and formulating objectives and hypotheses to methods, measurement tools, and research results.

In the third chapter, the researcher described the results and conclusions of both quantitative and qualitative research and proposed the use of project method tools alongside identifying effective financial indicators. This chapter consists of 5 subchapters and spans 57 pages. The entire doctoral dissertation comprises 174 pages.

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III. SYNTHETIC DESCRIPTION OF THE SECTIONS OF THE WORK

The dissertation consists of three sections, analyzing 197 literary sources and data obtained during the research process from primary and secondary sources. These sources were gathered through quantitative and qualitative research using measurement tools and financial indicators.

The first subsection of the first section presents theoretical considerations in the conceptual field of management and project management. The second subsection focuses on management functions in both theory and practice, highlighting those deemed most important by the author. The next subsection provides a conceptual analysis of the design method, including an extensive discussion of its components. This is followed by a logical discussion in which the researcher naturally introduces the design method as a management tool in enterprises, extending into its practical application. In the sixth subsection, the author begins analyzing the personality of a manager in management. The next two subsections deepen this analysis by describing project managers and their skills in detail and embedding them within the cultural and project environment, outlining the essence of projects, competencies, and management processes. The penultimate subsection presents selected competencies that a project manager should identify with. The first section concludes with a subsection discussing financial indicators used in project management and their effectiveness.

The second section, consisting of eight subsections, presents the genesis of the research problem, the research concept, and the research area. Along with defining the research objective, the hypothesis is also formulated, supplemented by measurement tools that the researcher used during the analysis.

The third section is empirical and consists of five subsections. It presents the results of quantitative research using a survey questionnaire based on a five-point Likert scale and in-depth interviews as a qualitative research method. To confirm the significance of the research, the author also performed a Student's t-test for dependent samples and presented the results. This analysis enabled the researcher to validate previous claims and demonstrate the relationship between using the project method and financial indicators.

The dissertation includes three main sections, comprehensively presenting theoretical and practical aspects of enterprise management using the project method, as well as empirical research findings. The dissertation structure allows for a systematic analysis of the research questions, starting from theoretical foundations, through a detailed examination of managerial competencies, and concluding with empirical verification of the proposed assumptions.

In the first section, the author conducted a theoretical and methodological analysis of enterprise management. Initially, the research concept, which serves as the foundation of the dissertation, is explained. Then, the theoretical aspects of business management are explored in detail, considering the main management functions both in theory and practice. Subsequent subsections are dedicated to the conceptual analysis of the design method, including its key elements and implementation methods. The author thoroughly examined the use of the design method as a management tool in enterprise practice, emphasizing its potential and providing examples of practical applications.

The second section focuses on analyzing the practical application of the design method in management. It begins with a discussion of the manager's role in project management, considering key competencies, skills, and formal requirements for a project manager. The author carefully analyzed project manager competencies, emphasizing their importance for effective project management. This section concludes with a detailed discussion of financial indicators used in projects, which play a crucial role in evaluating the effectiveness of implemented projects.

The third section, which has an empirical character, presents the research findings. It starts with a description of the quantitative research results obtained through a survey questionnaire based on a five-point Likert scale. Then, the results of qualitative research conducted through in-depth interviews are presented. The author performed statistical analysis using Student's t-test for dependent samples, which allowed for hypothesis testing and assessing the relationship between project method utilization and financial management efficiency in projects. The section concludes with a synthetic discussion of the conclusions drawn from the analysis.

The dissertation demonstrates a broad perspective on project management, combining strong theoretical foundations with practical aspects and empirical evidence of the effectiveness of

design methods. This research represents a significant contribution to the development of knowledge in business management and its practical application in project environments.

IV. FINAL CONCLUSIONS, FORMULATED RECOMMENDATIONS, AND SCIENTIFIC-PRACTICAL CONTRIBUTION OF THE STUDY

To conduct the research analysis, the author employed measurement tools for both types of methods: for quantitative methods, financial results analysis and statistical data were used, while for qualitative methods, interviews and observations involving the researcher, as well as comparative analysis based on the author's criteria, were applied.

The study was based on a sample of 300 selected enterprises from the specified sector. A significant survey response was achieved, with 1,271 questionnaires returned. Such a high response rate among entrepreneurs and managers indicates a strong interest in the examined issue.

The research analysis, presented in Section 3 of this work, was based on data, information, and analysis, during which the author used the so-called triangulation of quantitative and qualitative methods.

When analyzing the information and data obtained, the researcher applied the following criteria: in the case of quantitative research, interpretation was based on statistical data and the percentage of received responses. The next stage involved the author's interpretation, which was applied in qualitative methods, particularly in-depth interviews. In the case of Student's t-test, the author interpreted the results in alignment with indicators found in the literature.

Through this research approach, the author effectively achieved the study's main goal: "To identify the internal factors of a company that determine management efficiency using the project-based method" and, through systematic verification, confirmed the study's primary hypothesis: The project-based method contributes to the improvement of management activities in a construction organization.

The project-based method, enriched with additional management methods, enhances the efficiency of management activities in a construction organization.

The influence of the environment, economic variables, economic conditions, demand, and supply on the production of specific construction products is extremely important, and the justification for effective enterprise management is crucial for its continued market presence. Addressing this issue, the author set three specific research objectives:

1. Selecting the optimal management method for a construction company.

- In the first section, the author conducted a literature review and comparative analysis, identifying the most effective and optimal management methods for a construction company.

2. Optimizing empirical research methods.

- By triangulating quantitative and qualitative methods while simultaneously applying a qualitative comparative method and Student's t-test, the dissertation successfully identified distribution channels for the measurement tool, thus optimizing empirical research. The proper selection of a channel enabled an effective study.

3. Identifying the organizational competencies necessary for effective project management.

- In the first section, through analysis, comparison, and conclusions, the author proposed competencies necessary for effective project management, which serve as an original contribution.

- These competencies provided insights into management skills within the project-based method framework. The author concludes that achieving these three specific objectives also led to the accomplishment of the main research goal.

Does achieving all the objectives of the dissertation allow for effective verification of the primary and detailed hypotheses?

Through the research analysis and empirical study, the author realized that financial indicators alone are insufficient for effective management in a construction company. Contrary to the expanded hypothesis, the author demonstrated in the first and third sections that financial indicators alone are inadequate for effective management. This is supported by the fact that the project-based method integrates tools and techniques that ensure the highest possible efficiency and effectiveness.

The need for optimizing empirical research emerged as a key aspect, which the author addressed in the dissertation. The limitations of quantitative methods and the necessity to expand qualitative approaches led the author to adopt triangulation of quantitative and qualitative methods, resulting in more precise analysis and more reliable research findings.

The final specific objective was to highlight the importance of managerial competencies in effective project management, which the author demonstrated in the first section. The refinement of the three detailed hypotheses ultimately validated the primary hypothesis:

> The project-based method contributes to the improvement of management activities in a construction company.

Upon analyzing the primary hypothesis, the researcher concludes that the project-based method enhances management efficiency in a construction company; however, management personnel often lack sufficient awareness, or the combination of tools and methods is suboptimal. Companies evolve continuously, dynamically increasing their organizational awareness of the project-based method and management efficiency. Time and economic market conditions will be the best test of the speed at which knowledge and experience are acquired.

Major Contributions to the Field of Management Science

Theoretical Contributions:

- Analysis of management and project management theories.
- Classification and categorization of concepts in the cognitive process.
- Understanding management as a continuous process evolving alongside the organization.
- Establishing the relationship between project management and financial indicators.

Practical Contributions:

- Conducting research at the intersection of organization – competency – finance.
- Identifying factors that determine effective project management using financial indicators.
- Highlighting the lack of project analysis in most construction companies.
- Demonstrating that financial indicators aid in project management.

Management science is a discipline focused not only on theoretical considerations but also on the practical implementation of models.

V. SCIENTIFIC PUBLICATIONS RELATED TO THE DISSERTATION

1. ARTICLES IN JOURNALS

1. M. Ślusarczyk, Change management in industry in the Vuca times, „International Marketing and Management of Innovations” Global Scientific Journal, №6, 2021, p. 57-74, E-ISSN: 2451-1668.
2. M. Ślusarczyk, Economic analysis based on indicators In the company, VUZF Review, DOI: 10.38188/2534-9228.22.1.11, vol. 7 no. 1, 2022.
3. M. Ślusarczyk, I. Kęsy, Patrycja Ślusarczyk, Use of designe methods In optimising the economic of an enteprise, VUZF Review, DOI: 1038188/2534-9228.21.4.23 , vol 6 no.4, 2021
4. M. Kęsy, M. Ślusarczyk, Zarządzanie przedsiębiorstwem turystycznym w dynamicznym otoczeniu, Zeszyty Naukowe WSG Bydgoszcz, 2022.

2. Chapters in monography

1. M. Ślusarczyk, M. Kęsy, Managing the behavioral competencies of managers in construction projects, [in:] Enterprise management, ed. M. Kęsy, Publishing House of the University of Economy in Bydgoszcz, Bydgoszcz 2020.
2. M. Ślusarczyk, M. Kęsy, Management of behavioral competencies in construction projects, [in:] Manager's competences, ed. M. Kęsy, Ł. Moniuszko, Publishing House of the University of Economy in Bydgoszcz, Bydgoszcz 2020, ISBN: 978-83-65507- 52-5.

VI ДЕКЛАРАЦИЯ ОБ ОРИГИНАЛЬНОСТИ ДИССЕРТАЦИОННОЙ РАБОТЫ

Декларация Мачея Слюсарчика относительно диссертационной работы

Я заявляю, что диссертационная работа полностью написана мной и не нарушает авторских прав других лиц.

Я заявляю, что данная диссертационная работа не дублирует ни один из фрагментов моей магистерской работы, под названием *„Анализ ресурсов в инвестиционном процессе в строительстве на основе циркулярной экономики”*, на основании которой в 2020 году в Высшей Школе Экономики в Быдгоще мне была присвоена степень магистра в области экономики управления.

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Мачей Слюсарчик

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