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## Evolution of Project Management Dissertation Topics in Poland: A Comparative Analysis of Project Master Competition Data (2015-2024)

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### **Abstract:**

**Purpose:** The aim of this article is to analyse the evolution of project management thesis topics submitted to the Project Master competition in Poland between 2015 and 2024. The study aims to identify the main trends in terms of topics taken up by students in their theses and areas of increasing importance in the context of academic project education.

**Design/Methodology/Approach:** The study used a descriptive-analytical qualitative approach, enriched with elements of quantitative analysis. A triangulation of methods was used: desk research, document analysis, open coding inspired by Grounded Theory and trend analysis. The metadata of 319 thesis titles submitted to the competition were analysed.

**Findings:** The survey results indicate a growing interest in modern project management topics such as agile approach in project management (Agile) and artificial intelligence (AI), while maintaining the presence of classic topics such as project feasibility studies. Changes were also observed in the structure of the types of theses submitted, particularly the increase in the number of undergraduate and doctoral theses in recent years.

**Practical Implications:** The conclusions of the survey can support universities in adapting educational programmes to current market trends and developing competences in line with labour market needs, as indicated by the themes of the theses submitted to the Project Master competition.

**Originality/Value:** The article brings a unique longitudinal perspective to the analysis of academic interest in the area of project management in Poland. It also reveals the role of academic competitions as tools for identifying subject trends and activating students in applied project knowledge.

**Keywords:** Project management, thesis, Agile, AI, academic competitions, student.

**JEL Codes:** M53, I23, M10.

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## 1. Introduction

The subject of project management is gaining importance in both business and academic practice, becoming an important area of research and education. With dynamic economic, technological and social changes, there is a growing market demand for professionals with not only practical competence in project work, but also theoretical knowledge.

This demand is confirmed by the nationwide Project Master competition for the best diploma thesis in project management, for which the number of applications is steadily increasing.

The purpose of this study is to analyse the topics of project management theses submitted to the Project Master competition between 2018 and 2024. These are contrasted with the structure of thesis topics submitted between 2015 and 2018. The key research question is: *How have the topics of theses submitted to the Project Master competition changed over recent years, and what trends can be identified in the context of project management research?*

This study is important because it not only allows for identifying current research and teaching priorities in this area, but also points to the directions in which project education is evolving.

The scope of the study is to analyse the titles of the works submitted to the competition over a designated time horizon. The study is based on data from the Project Master competition documentation, which is a unique source of knowledge about the formation of research interests of students at different levels of education.

The theoretical considerations in the study refer to the role of project management education in Poland and to the importance of employees' demand for project competences in the current labour market. The study is part of the current of

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previous research on the development of project management education and contributes to the understanding of thematic dynamics in this area. It also identifies potential research gaps and recommendations for future research and educational activities.

## **2. Literature Review**

### **2.1 Project Education in Poland**

Project management education in Poland has undergone significant development over the last two decades. This area has become a permanent part of the didactic offer of higher education institutions - both public and non-public - at first - and second-cycle and postgraduate levels (Kozarkiewicz, 2016). With the growing importance of project work in the economy, project management has acquired the status of a transversal competence, relevant in almost all sectors.

There is a clear trend towards standardisation of knowledge and learning content in education programmes, covering both project management methodologies (e.g., IPMA ICB, PRINCE2, PMBOK) and certification systems. This standardisation may result from the growing need to ensure competency and operational uniformity in projects implemented in different contexts - from industry to public administration (Kozarkiewicz, 2016).

Within academic education, the implementation of dedicated study programmes, thematic laboratories, study circles and educational projects aimed at the practical development of design competences among students is observed (Sorychta-Wojczyk, 2020).

Such activities should be seen as part of a broader process of development and popularisation of project management in academia. They are a response to the growing importance of project work in the economy and the need to educate professionals with both methodological knowledge and application experience. In addition, they foster project awareness and integration between academia and market practice, which is of key importance in the context of effective preparation of graduates for the challenges of the contemporary labour market.

### **2.2 The Place of the Project Master Competition in the Project Management Popularisation System**

The Project Master competition was launched in 2002 as a nationwide initiative to promote project management knowledge in the academic environment. The competition is now characterised by its cyclicity, but not in every year since the first edition. Since its inception, it has played an important role in integrating science and project practice, providing a platform for dialogue between universities,

students, promoters and professional organisations in the field of project management.

The main organiser of the competition is the International Project Management Association Poland (IPMA Poland) - an association promoting standards and good practices in project management.

The Master's project is a competition for the best thesis in project management. It includes:

- bachelor's and engineering thesis,
- master's thesis,
- postgraduate thesis,
- doctoral thesis.

The aim of the competition is to identify and honour authors of theses that add significant value to the development of project management theory and practice by presenting innovative approaches, case studies, models, methods and results of application research.

Thanks to the cyclical nature of the event and systematic analysis of the subject matter of the submitted thesis, it provides an opportunity to identify current trends, research priorities and labour market expectations of graduates in project management.

### **3. Research Methodology**

The study was embedded in the descriptive-analytical qualitative research stream, with elements of quantitative (comparative) analysis (Apanowicz, 2000). The aim was to capture changes in the topics of the thesis submitted to the Project Master competition over a selected time horizon (e.g., 2015-2024), taking into account trends and developments in project management in academia.

The subject of the study was the subject of the theses (undergraduate, master's, engineering, postgraduate, doctoral) submitted for the Project Master competition.

The aim of the study was to:

1. to compare the themes of work submitted to the Project Master competition over two periods: e.g., 2015-2018 vs. 2018-2024.
2. Identification of changing thematic trends, including the rise of the agile approach or the usage of AI.
3. Analyse changes in the structure of thesis types (undergraduate, master's, postgraduate, PhD).

A triangulation of research methods was used, including desk research, document analysis, content analysis, quantitative comparison and trend analysis. The desk research included a review of the literature on the subject, industry reports and previous studies on the Project Master competition, which allowed the research context and initial analytical categories to be identified (Jonker and Pennink, 2009).

Document analysis consisted of a review of the submitted theses based on metadata such as titles, abstracts and keywords. As part of the content analysis, a classification of the papers into separate thematic categories was carried out using open coding inspired by the Grounded Theory approach (Glaser and Staruss, 1999).

A quantitative comparison enabled the number of papers in each thematic category to be collated by year and type of study. Complementing the research process was a trend analysis to capture the dynamics of thematic change over time and to identify issues gaining or losing popularity.

The study has several limitations that must be taken into account when interpreting the results. Firstly, only the metadata (titles, abstracts, keywords) of the theses were analysed, without analysing their full content, which may limit the accuracy of the thematic classification.

Secondly, the analysis covered only the theses submitted to the Project Master competition, which means that the results cannot be generalised to the entire population of diploma theses in project management in Poland.

Additionally, the content coding method adopted is partly subjective in nature, which may affect the interpretation of the assigned categories.

## **4. Research Results and Discussion**

### **4.1 Number of Works Reported between 2018 and 2024**

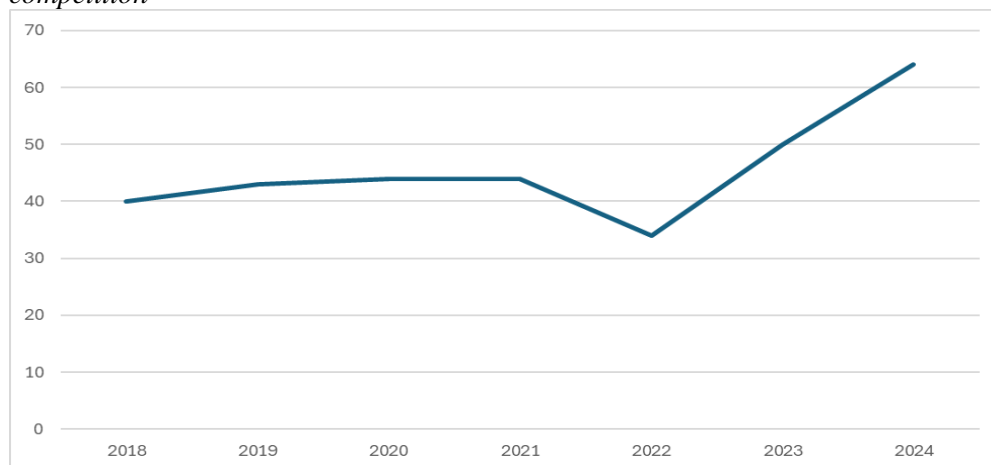
A study was carried out in March 2025 to analyse the number of submissions to the Project Master competition between 2018 and 2024, distinguishing the type of thesis. These were divided into the following types: bachelor's/engineering thesis, master's thesis, doctoral thesis and postgraduate thesis. In addition, the study assigned a corresponding keyword to each thesis topic, which defines the main thematic scope of the thesis.

The following keywords were adopted for this study: project finances, human resources in the project/HR, project stakeholders, IT tools in project management, AI, project planning/scheduling, Agile/Scrum, risk management, project management methods/models, feasibility study of the project, project management competencies and other. The following number of entries were submitted to the

competition: 40 theses in 2018, 43 theses in 2019, 44 theses in 2020 and 2021, 34 theses in 2022, 50 theses in 2023 and 64 theses in 2024.

In total, 319 theses were submitted over the seven years. All of them were further analysed. From this data, it was noted that there is an upward trend in the number of theses submitted, with the exception of 2022. The changes in the number of theses submitted are shown in Figure 1.

**Figure 1.** Number of theses submitted between 2018 and 2024 for the Project Master competition



**Source:** Authors' calculations.

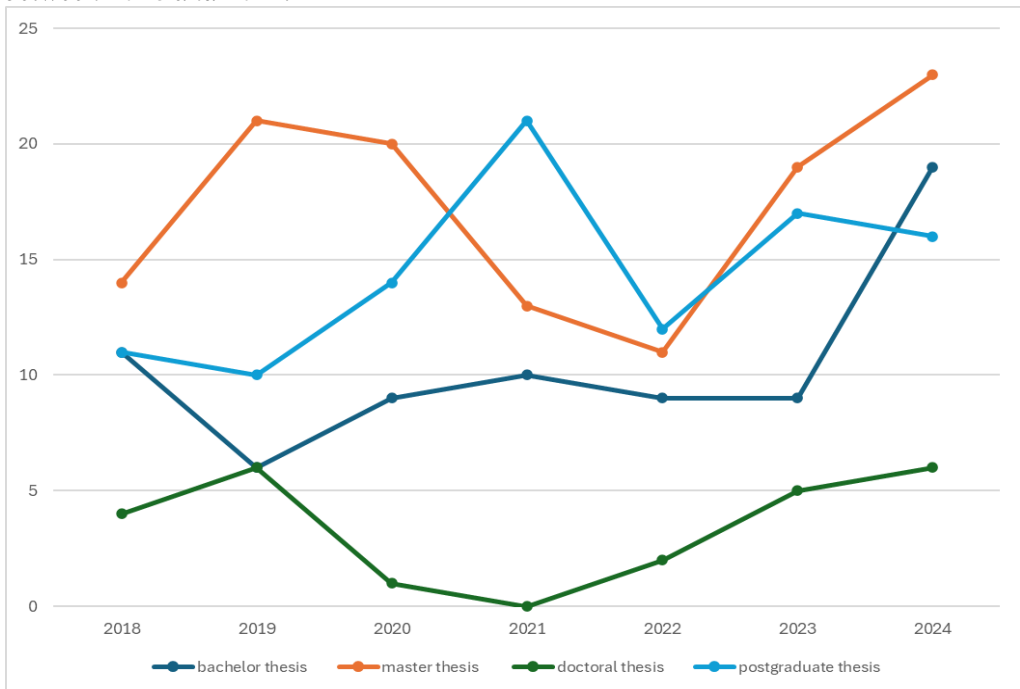
An analysis of the number of theses submitted to the Project Master competition between 2018 and 2024 shows varying trends for the different educational levels. The greatest fluctuations can be observed in the Master's thesis category, the number of which varies from 11 to 23 theses per year.

It is noteworthy that there is a clear increase in the number of undergraduate theses submitted in 2024 (19 theses compared to 9 theses in the previous two years). This may indicate an increased interest among first degree students in the topic of project management.

For the PhD thesis, there is a noticeable decrease in the number of submissions in 2020 and 2021 (1 and 0 theses), followed by a gradual increase in the following years, reaching 6 theses submitted in 2024. This may be indicative of the growing importance of project management research.

In contrast, the number of postgraduate theses is relatively stable, with a peak in 2021 (21 theses) and a renewed increase in 2023 (17 theses). Figure 2 shows how the number of submitted papers of all types has changed over the years.

**Figure 2.** Quantities of theses by type submitted to the Project Master competition between 2018 and 2024.



*Source: Authors' calculations.*

## 4.2 Analysis of Thematic Trends

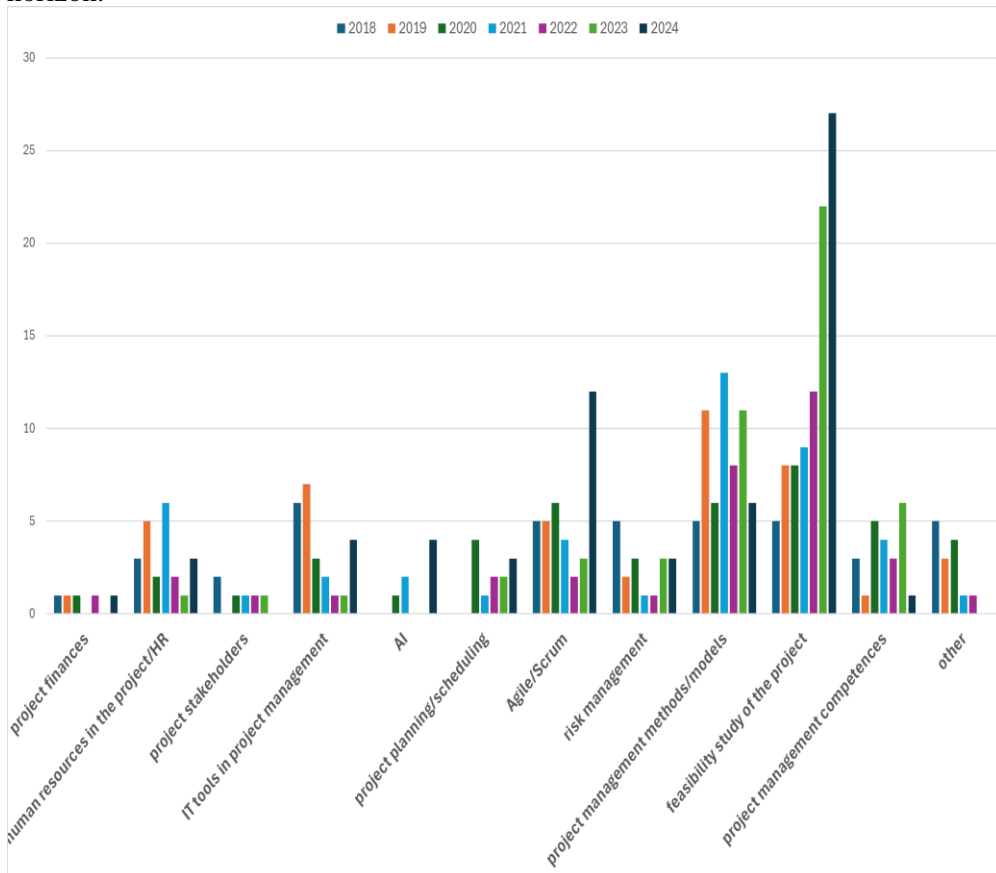
An analysis of the keywords assigned to the papers makes it possible to identify the dominant areas of interest of the contestants in each year. Throughout the 2018-2024 period, the 'feasibility study of the project' category was the most popular, with a total of 91 submissions. In 2024 was a marked increase in the number of related papers (27), which may indicate a growing interest in project feasibility assessment in business practice.

There was also significant interest in 'project management methods/models' (60 papers in the period under review), suggesting a strong interest in tools to improve management processes. From 2021 onwards, a steady increase in interest in 'Agile/Scrum' can be observed, with the number of papers related to this approach peaking in 2024 (12 papers), reflecting global trends in the agile approach to project management.

It is worth noting the increasing number of submitted papers on the topic of artificial intelligence (AI) in project management. In 2018-2019, there were no papers related to this topic, while from 2021 onwards, the number started to increase steadily, reaching 4 submitted papers in 2024.

This may indicate the entry of AI into project management areas and the increased awareness of researchers in this area. In contrast, some topics, such as 'risk management' or 'human resources in the project/HR', have remained stable throughout the period analysed. It can be concluded that these are constant areas of interest for students and researchers in the field of project management. A summary of the results of the surveys conducted is presented in Figure 3.

**Figure 3.** Breakdown of entries to the Project Master competition by keyword in 2018-2024 horizon.



**Source:** Author's calculations.

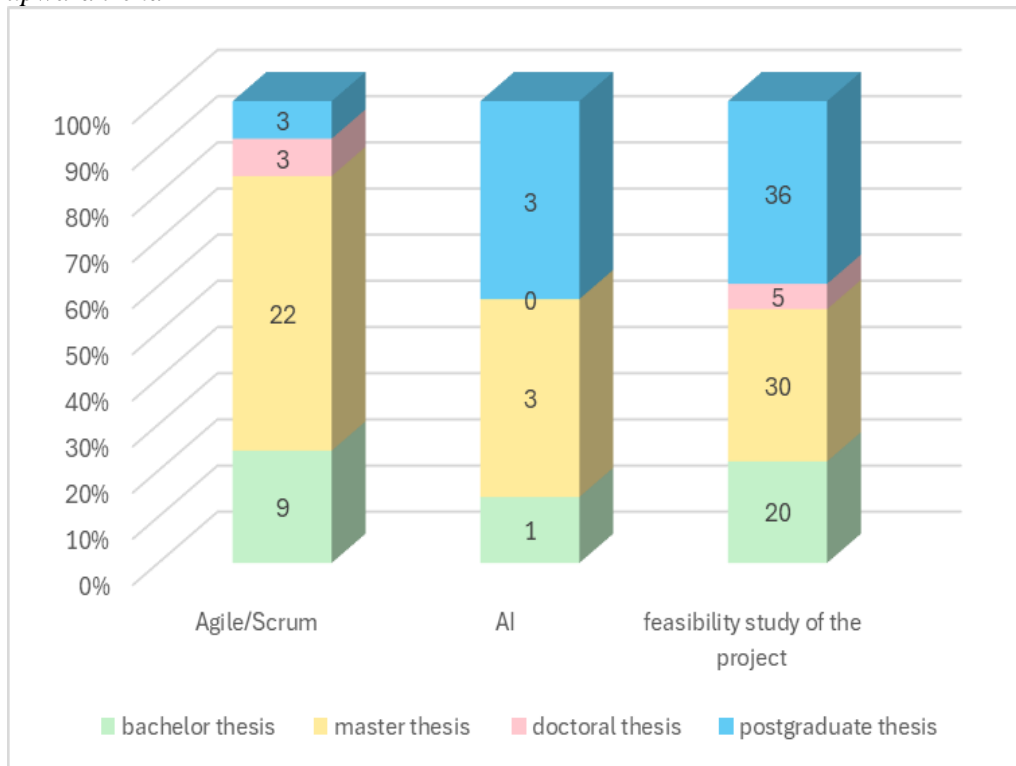
On the basis of the survey, three subject areas in the field of project management characterised by particularly dynamic development were identified. There is a noticeable increase in the number of papers related to the 'feasibility study of the project', which covers all educational levels, with the highest number of submissions among master's and postgraduate theses.

Another interesting trend is the increase in popularity of Agile/Scrum-related topics, especially in undergraduate theses, which may indicate a greater role for these methods in education at an early stage of an academic career. Artificial Intelligence, on the other hand, still remains a niche topic, but there has been an increase in interest in undergraduate and postgraduate theses, which may indicate the growing importance of AI in project management practice.

Analysis of Figure 3 and Figure 4 shows clear differences in the popularity of the different topics depending on the type of thesis. In the area of Agile/Scrum, Master's (22) and Bachelor's (9) theses dominate, suggesting that this topic is of particular interest to students at earlier stages of their education. In the area of AI, on the other hand, the largest number of thesis appear at master's (3) and postgraduate (3) level, indicating a more advanced approach to this topic among researchers.

In contrast, 'feasibility study of the project' is widely represented in all categories, with the highest number of postgraduate (36) and masters papers (30), suggesting that this topic is central to both practitioners and theorists in project management.

**Figure 4.** Theses submitted to the Project Master competition in 3 areas with an upward trend



Source: Authors' calculations.

## **5. Conclusion**

The data collected allows us to identify significant trends in the topics of work submitted to the Project Master competition. There is a noticeable increase in interest in issues related to modern approaches to project management, such as Agile or AI. At the same time, classic areas such as feasibility study of the project and management models persist. It can be assumed that in the years to come, the thesis topics will increasingly adapt to technological changes and the challenges of modern project management.

Analysing the results of the present study in comparison with the previous study conducted in 2015-2018, several significant differences can be observed. In the previous study, not only the number and subject matter of the submitted thesis were included, but also information on the supervisors and universities, which allowed for a broader analysis of academic collaboration in the Project Master competition.

Between 2015 and 2018, a significant increase in the number of master's thesis and postgraduate thesis was observed (Rzempala and Soroka-Potrzebna, 2019), while in the current study there is more fluctuation in the number of undergraduate and doctoral dissertation.

Additionally, while previous analyses have shown a dominance of topics related to project management methods and models and feasibility studies (Rzempala and Soroka-Potrzebna, 2019), between 2018 and 2024 there is an increasing interest in modern areas such as Agile or artificial intelligence in project management. This indicates changing research priorities and the impact of dynamic technological developments on thesis topics.

Analysing the results, the following research gaps can be observed. Despite the increased interest in AI in project management, the number of papers on this topic is still relatively low. This suggests the need to delve deeper into the research by analysing the subject matter of the papers in more detail. It is possible that aspects related to AI are addressed in the content of the thesis and do not directly follow from the thesis title.

Furthermore, it is possible that these in AI topics are not submitted to the Project Master competition. This suggests a research gap related to investigating how the thesis authors found out about the competition and how they should be informed about the opportunity to participate in the competition. Based on the results of the number of works submitted to the competition, there is an increasing trend.

A research gap is the reason behind the increased interest in the Project Master competition, which could be verified through direct research involving the thesis's authors. Future research directions could also include analysing the links between thesis topics, changing market trends, and employers' expectations of project

management graduates. It is also worth looking at the impact of the COVID-19 pandemic on thesis topics in 2020-2021, as it is possible that changes during this period have had a long-term impact on the choice of research topics.

In summary, the data collected provides valuable information on the direction of thesis topics in project management, but at the same time points to potential areas for further research and exploration.

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