

INFLUENCE OF CRITICAL SUCCESS FACTORS IN THE PERFORMANCE OF INFRASTRUCTURE PROJECTS IN QATAR

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Abstract

This thesis focuses on developing an understanding of factors that can help in increasing the project performance in Qatar and elsewhere. The understanding leads to the focus on factors in the design, development and operation of the project. This thesis identifies 23 critical success factors in four different groups: top management support, project manager's skills, project team's skills, and stakeholder management knowledge. The thesis also identifies four main project success criteria: project delivery on time, within the budget, with expected quality, and meeting stakeholder's satisfaction.

Novelty in Thesis

1. The **development of the relation between the project performance and the critical success factor is done for the first time in Qatar**. The thesis tests 23 hypothesis on the impact of critical factors in the successful completion of the project in Qatar and 10 hypothesis on the relation between the knowledge of the project manager and the project performance.
2. The **thesis also develops the difference in the perception on factors** related to project success and knowledge related to project performance.

Introduction

It is important to understand the factors and project performance related to the projects and they are collectively provided in (Bekr, 2017), (Niagara & Datche, 2015), (Ibrahim, 2019) and (Khamaksorn, 2018). Based on the focus of the thesis, the following two objectives and two research questions are discussed in this thesis:

- 1- To identify the key success factors and criteria in construction projects, especially in the government sector in Qatar.
- 2- To evaluate the relationship between project performance and application of project knowledge areas.

Research Questions:

- RQ1:** What are the most important factors that contribute to the success of projects?
RQ2: What are the critical project knowledge areas that affect construction project performance?

Methodology

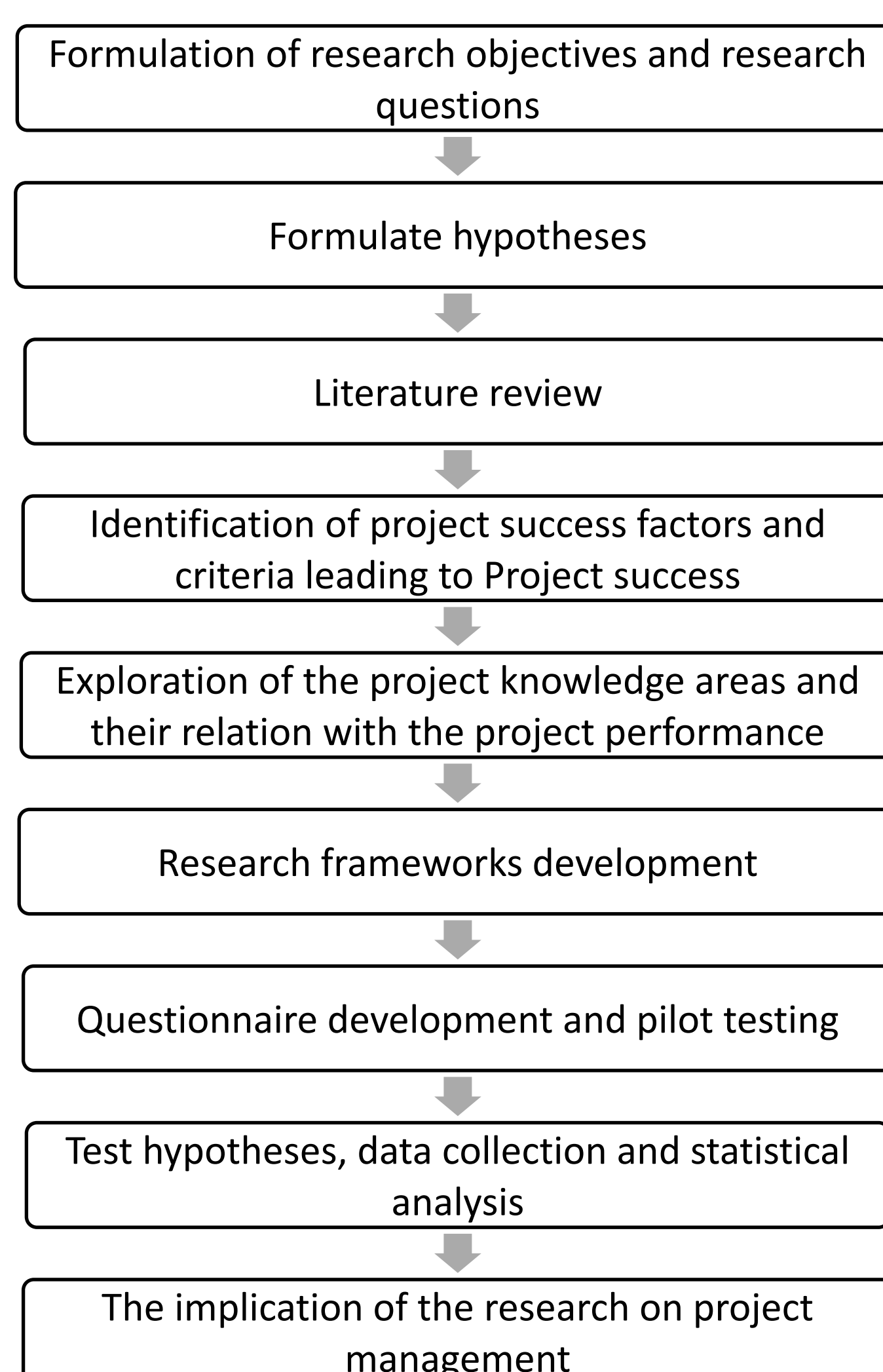


Figure 1. Research methodology

Literature Review

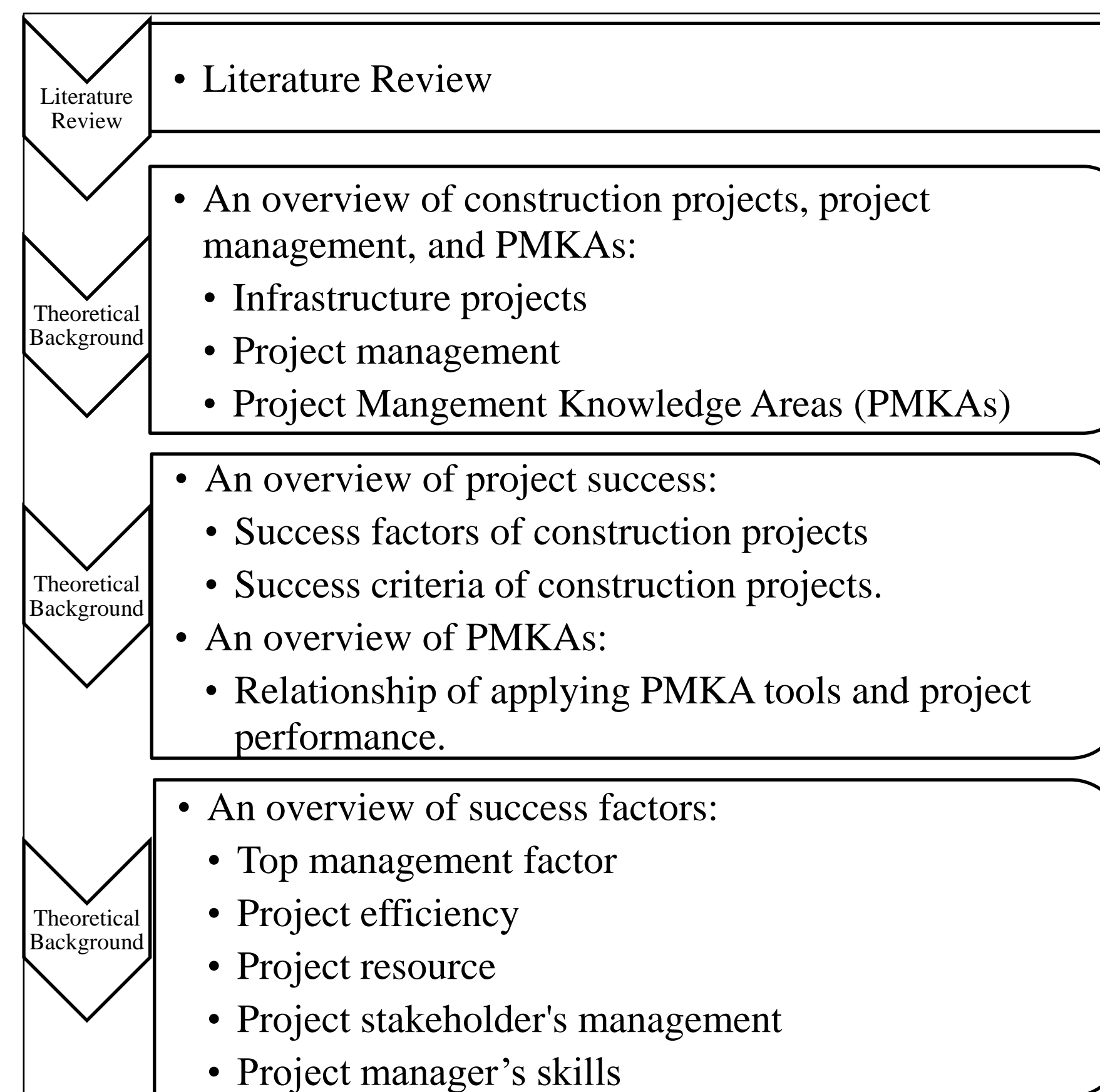


Figure 2. Structure of the literature review

Research Framework

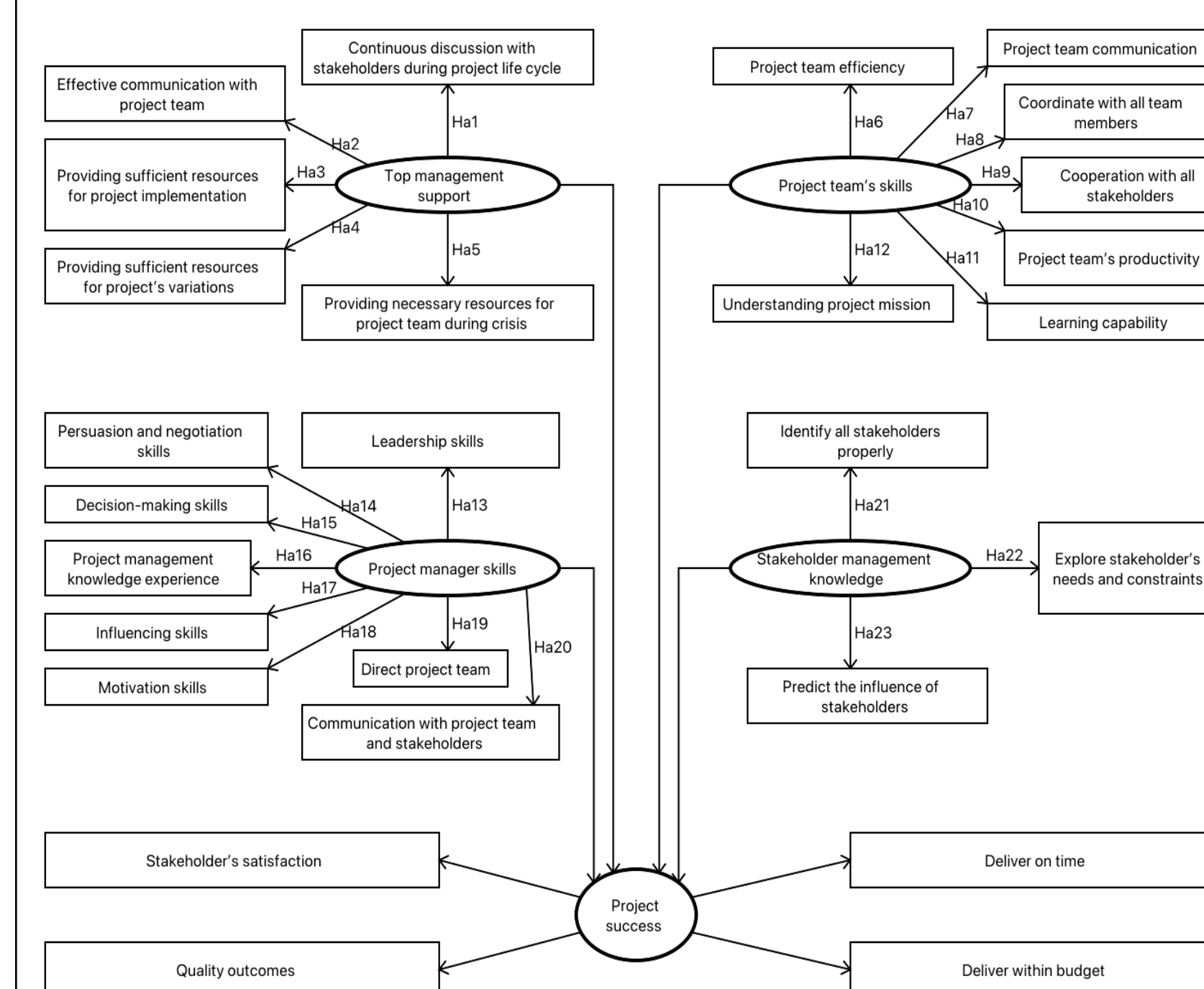


Figure 3. Part A - Conceptual framework model for the developed hypotheses related to success factors.

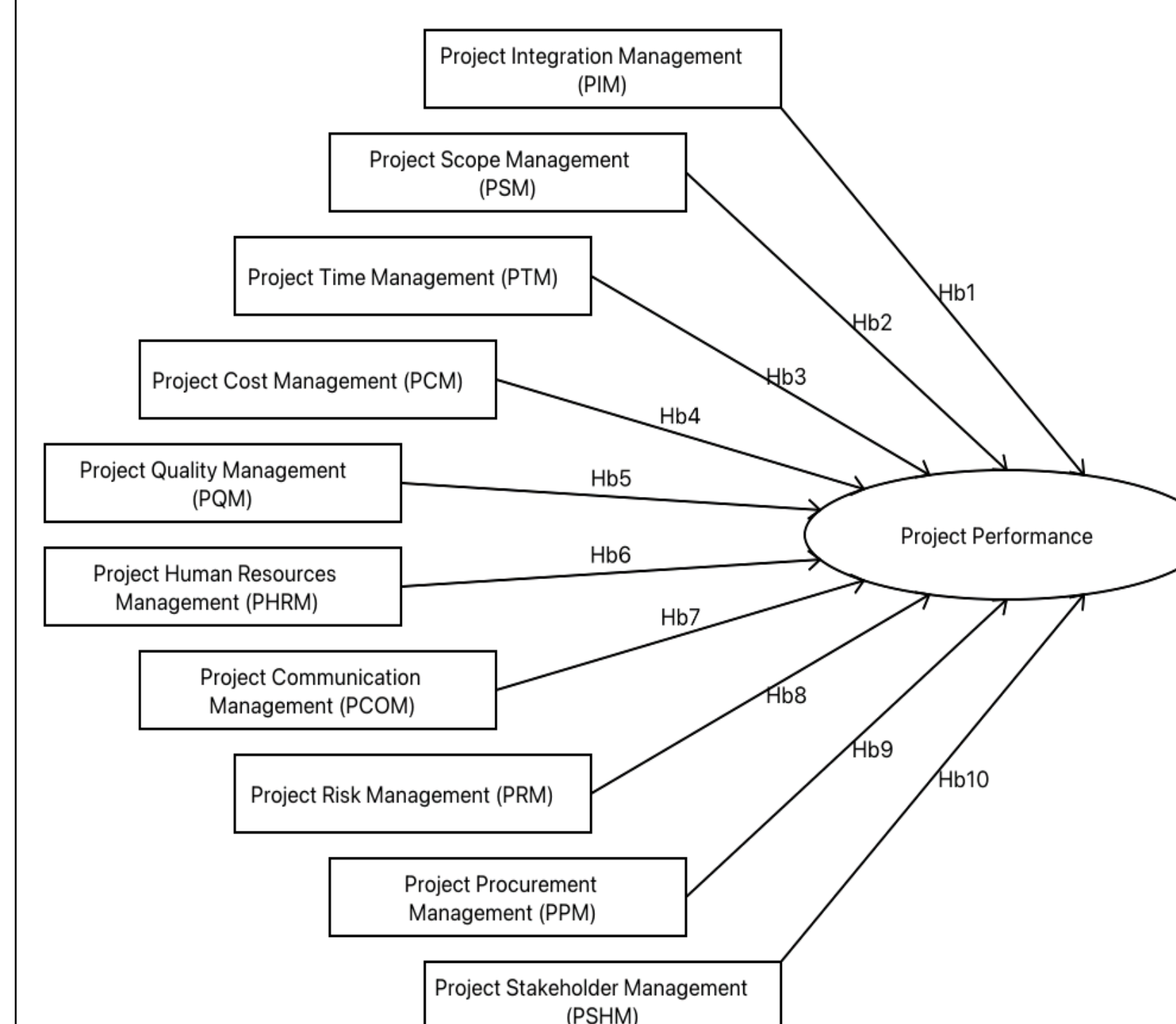


Figure 4. Part B - Conceptual framework model for the developed hypotheses related to PMKAs.

Results

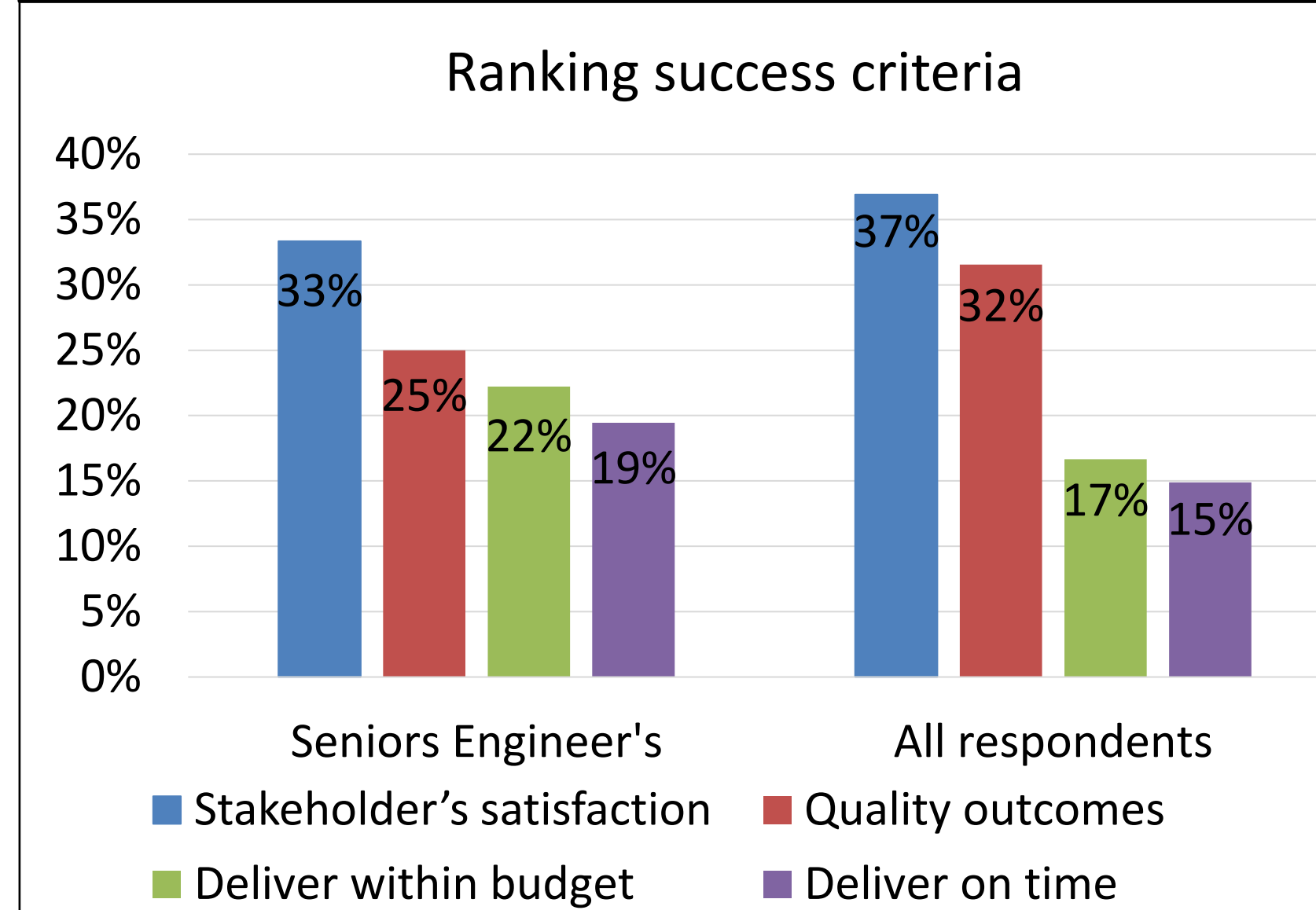


Figure 5. Ranking success criteria by respondent's distribution

Discussion

Table 1. Top Five Ranked Success Factors.

Group number	Top success factors	RII	Rank
Group 1: Top management support	Effective communication with the project team	0.967	1
Group 1: Top management support	Continuous meetings with the stakeholders during the project life cycle	0.930	2
Group 2: Project team skills	Project team communication	0.928	3
Group 3: Project manager's skills	Decision-making skills	0.915	4
Group 1: Top management support	Providing sufficient resources for the project	0.913	5

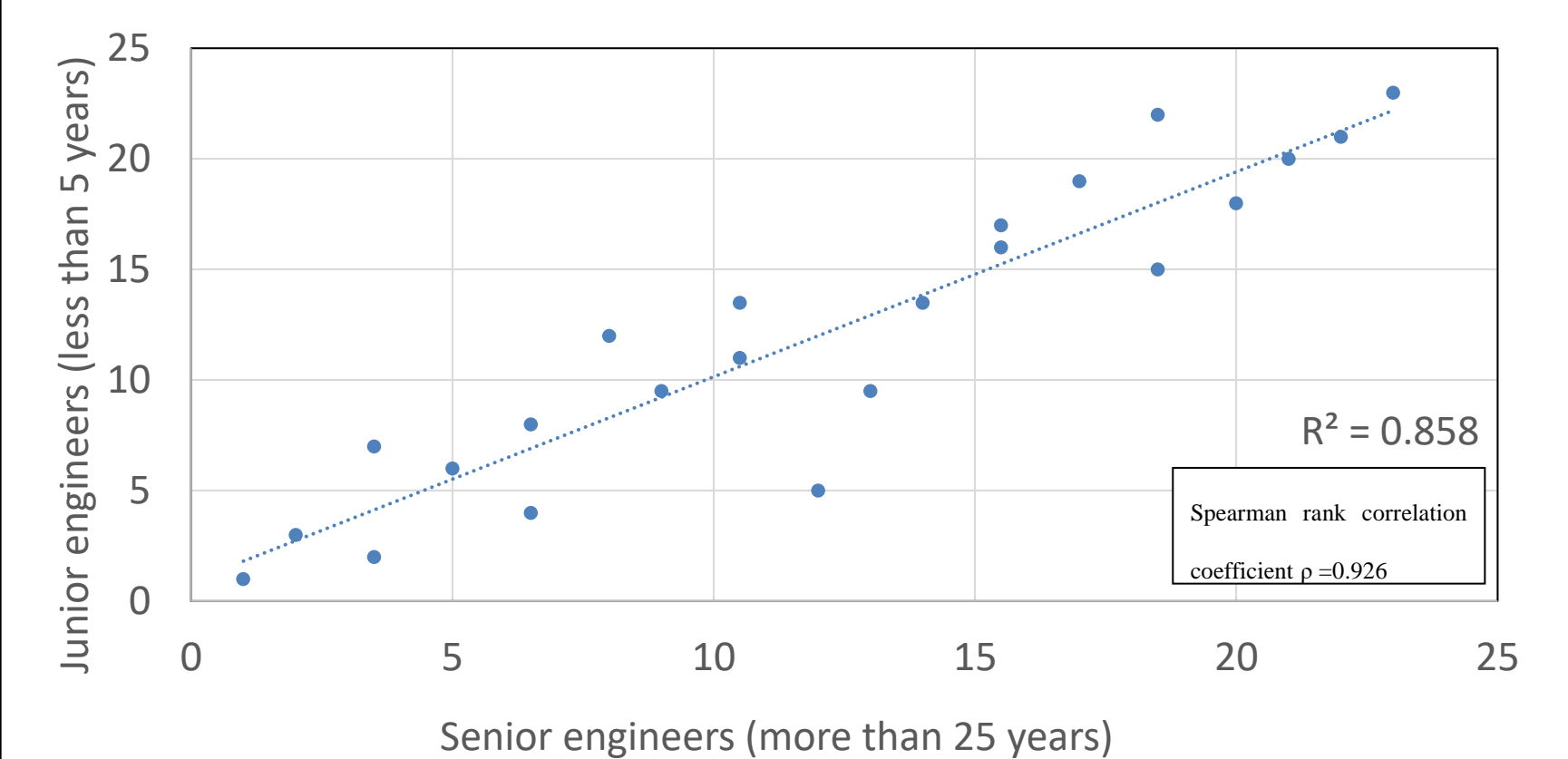


Figure 6. Correlation of the perception of (Junior Vs. Senior Engineers) on the project success factors

Table 2. Top Five Ranked PMKAs.

Top PMKAs	RII	Rank
Project Cost Management	0.967	1
Project Quality Management	0.930	2
Project Time Management	0.928	3
Project Scope Management	0.915	4
Project Human Resource Management	0.913	5

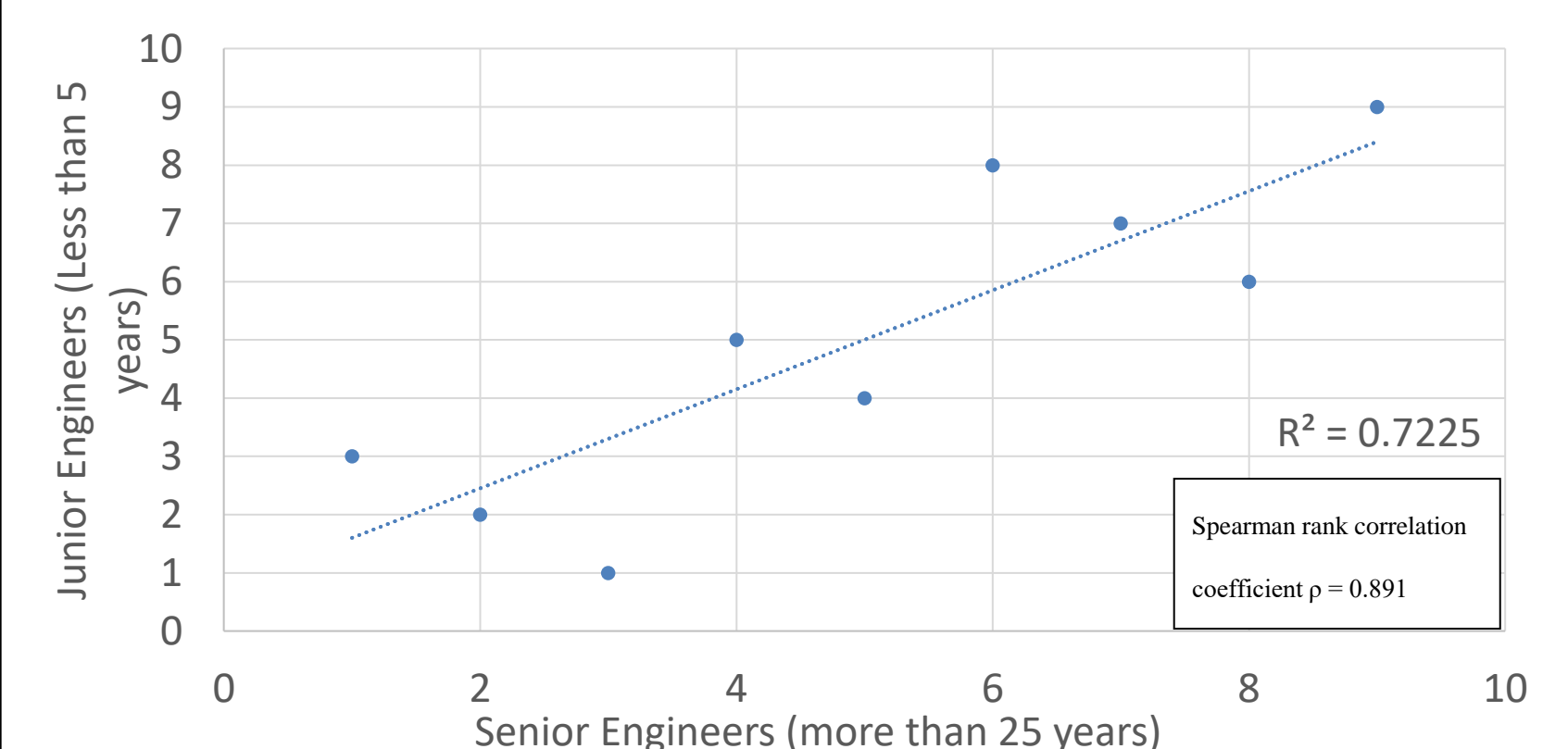


Figure 7. Correlation of the perception of (Junior Vs. Senior Engineers) on the PMKAs

Conclusions

- All project managers perceive a strong relationship between the factors and the success in construction industry.
- Based on relative ranking, top management support is very important to project success.
- Among the four success criteria, stakeholder's satisfaction is the key for project success.
- Project managers should have all knowledge areas, except procurement, for better project performance.

References

- Bekr, G. (2017). Factors affecting performance of construction projects in unstable political and economic situations. *Journal of Engineering and Applied Sciences*, 5384.
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- Niagara, P., & Datche, E. (2015). Factors Affecting the Performance of Construction Projects: A Survey of Construction Projects in the Coastal Region of Kenya. *International Journal of Scientific and Research Publications*, 2250-3153.