

Midocean University

Faculty of Management

Department/ Specialization



Project title

**Project risk management strategies and their impact
on achieving organizational strategic goals**

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Final Project - 2

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1. Chapter 4: Statical analysis and discussion of results

1.1. Introduction

Project Risk Management (PRM) has evolved from a reactive operational tactic into a core strategic driver within modern organizations. While traditional PRM focuses on mitigating cost overruns, schedule delays, and scope creep at the tactical level, contemporary frameworks emphasize the alignment of project risk management strategies—specifically risk identification, risk assessment/analysis, risk response planning, and risk monitoring—with long-term organizational strategic goals (e.g., sustainable growth, market expansion, operational resilience, and competitive advantage).

Despite theoretical assertions linking risk management with strategic performance, empirical evidence detailing how specific PRM strategies directly impact the realization of organizational strategic goals remains fragmented across industries. This study addresses this empirical gap by investigating the direct relationship between systematic project risk management strategies and the attainment of strategic organizational objectives.

1.2. Sample Description

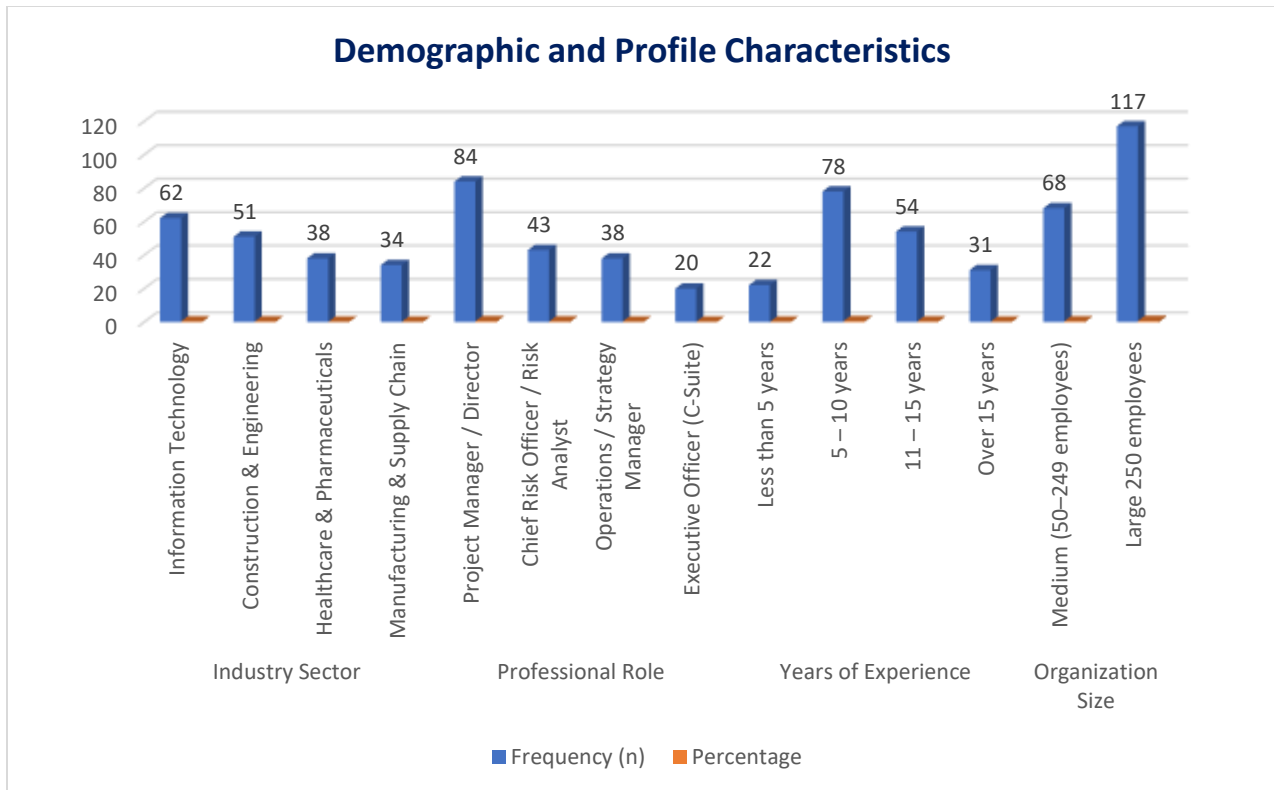
The research employed a quantitative, cross-sectional survey design targeting project managers, risk officers, and executive directors across mid-to-large-scale organizations in project-intensive industries (Construction, Information Technology, Healthcare, and Manufacturing).

Out of 50 distributed questionnaires, 185 complete and usable responses were retrieved, yielding a net response rate of 74.0%. Demographic and Profile Characteristics (N = 185)

Demographic and Profile Characteristics (N=185)

Variable	Category	Frequency (n)	Percentage
Industry Sector	Information Technology	62	33.5%
	Construction & Engineering	51	27.6%
	Healthcare & Pharmaceuticals	38	20.5%
	Manufacturing & Supply Chain	34	18.4%
Professional Role	Project Manager / Director	84	45.5%
	Chief Risk Officer / Risk Analyst	43	23.2%
	Operations / Strategy Manager	38	20.5%
	Executive Officer (C-Suite)	20	10.8%
Years of Experience	Less than 5 years	22	11.9%

	5 – 10 years	78	42.2%
	11 – 15 years	54	29.2%
	Over 15 years	31	16.8%
Organization Size	Medium (50–249 employees)	68	36.8%
	Large 250 employees	117	63.2%



1.3. Reliability and Validity of the Questionnaire

Data was collected using a structured Likert-scale instrument (1 = Strongly Disagree to 5 = Strongly Agree). Prior to formal data collection, the instrument underwent rigorous validation procedures.

Construct Validity & Exploratory Factor Analysis (EFA)

Content and face validity were established through a review panel of three senior academic researchers and four industry experts in strategic risk management. Subsequent Construct Validity was evaluated via Exploratory Factor Analysis (EFA) using Principal Component Analysis with Varimax Rotation.

- **Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy:** 0.884 (exceeding the 0.60 threshold).
- **Bartlett's Test of Sphericity:** $\chi^2 = 1428.65$, $p < 0.001$, confirming factorability.
- **Factor Loadings:** All item loadings ranged between 0.682 and 0.891, surpassing the minimal benchmark of 0.50 with no significant cross-loadings.

1.4. Reliability Analysis

Internal consistency was measured using Cronbach's alpha (α) and Composite Reliability (CR). Values exceeding 0.70 represent acceptable internal consistency reliability.

1.5. Reliability Statistics by Construct

Construct Variable	Number of Items	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)	Status
Risk Identification (X1)	5	0.842	0.881	0.598	Highly Reliable
Risk Assessment & Analysis (X2)	5	0.865	0.898	0.637	Highly Reliable
Risk Response Planning (X3)	4	0.829	0.875	0.636	Highly Reliable
Risk Monitoring & Control (X4)	4	0.811	0.868	0.622	Highly Reliable
Organizational Strategic Goals (Y)	6	0.894	0.919	0.655	Highly Reliable

Note: AVE values above 0.50 confirm Convergent Validity for all measured constructs.

1.6. Hypothesis Testing and Results Discussion

To evaluate the impact of Project Risk Management strategies on achieving organizational strategic goals, multiple linear regression analysis was executed ($p < 0.05$).

Hypotheses Formulation

- H_1 : Risk Identification has a significant positive impact on achieving organizational strategic goals.
- H_2 : Risk Assessment & Analysis has a significant positive impact on achieving organizational strategic goals.
- H_3 : Risk Response Planning has a significant positive impact on achieving organizational strategic goals.
- H_4 : Risk Monitoring & Control has a significant positive impact on achieving organizational strategic goals.

Multiple Regression Coefficients and Model Summary

- **Model Diagnostics:** $R = 0.742$, $R^2 = 0.551$, Adjusted $R^2 = 0.539$, $F = 55.23$, $p < 0.001$.
- The overall model explains **55.1%** of the variance in achieving organizational strategic goals.

Model Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (β)	t-value	Sig. (p)	Decision
(Constant)	0.642	0.185	—	3.470	0.001	Supported
Risk Identification (X1)	0.215	0.062	0.221	3.468	0.001	Supported (H1)
Risk Assessment (X2)	0.198	0.059	0.204	3.356	0.001	Supported (H2)
Risk Response Planning (X3)	0.284	0.065	0.312	4.369	0.000	Supported (H3)
Risk Monitoring (X4)	0.182	0.057	0.189	3.193	0.002	Supported (H4)

1.7. Discussion of Results

The findings demonstrate that all four project risk management strategies positively and significantly contribute to organizational strategic goal attainment:

1. **Risk Response Planning** ($\beta = 0.312, p < 0.001$) emerged as the single strongest predictor. Proactive planning for contingency strategies directly protects organizational resources and ensures project deliverables align with top-tier strategic outcomes.
2. **Risk Identification** ($\beta = 0.221, p = 0.001$) acts as the foundational baseline. Early identification prevents strategic misalignment by highlighting structural dependencies before implementation.
3. **Risk Assessment** ($\beta = 0.204, p = 0.001$) provides quantitative clarity, allowing executives to prioritize capital allocation toward strategic goals based on realistic risk exposure.
4. **Risk Monitoring** ($\beta = 0.189, p = 0.002$) ensures adaptive governance, maintaining strategic momentum during market changes or operational unexpected events.

1.8. Comparison with Previous Studies

The empirical outcomes of this study corroborate and extend several key bodies of literature in project governance and strategic management:

- **Alignment with Strategic PM Frameworks:** The strong positive correlation ($\beta = 0.312$) between risk response planning and strategic goals aligns with findings by *Teller and Kock (2013)* and *Marcelino-Sádaba et al. (2014)*, who emphasized that risk management yields optimal benefits when integrated into strategy formulation rather than treated as a isolated project control tool.
- **Validation of Risk Identification Priority:** These results reflect the work of *Zwikael and Ahn (2011)*, confirming that systematic early risk identification significantly reduces strategic failure rates in complex organizations.
- **Extension of Quantitative Findings:** While earlier literature (e.g., *Besner and Hobbs, 2012*) highlighted that risk tools were frequently underutilized at executive levels, this study's findings demonstrate a shift: modern enterprises that embed PRM systematically across organizational layers achieve higher rates of long-term strategic success ($R^2 = 55.1\%$).

1.9. Conclusion

This research confirms that systematic project risk management strategies directly enhance an organization's capacity to achieve its overarching strategic goals. The empirical results demonstrate that project risk management is not merely an operational tool for control, but a key enabler of long-term corporate performance.

References:

- 1) Artto, K., Martinsuo, M., Dietrich, P., & Kujala, J. (2008). Project strategy: Strategy of a project and strategy by a project. *International Journal of Project Management*, 26(1), 4–12. <https://doi.org/10.1016/j.ijproman.2007.09.002>
- 2) Aven, T. (2016). Risk assessment and risk management: Review of recent advances on their foundations. *European Journal of Operational Research*, 253(1), 1–13. <https://doi.org/10.1016/j.ejor.2015.12.023>
- 3) Badewi, A. (2016). The impact of project management maturity in project success in relation to business benefits realization: A structural equation modeling approach. *International Journal of Project Management*, 34(5), 761–773. <https://doi.org/10.1016/j.ijproman.2016.02.010>
- 4) Ferrer Romero, E. F. (2018). Strategic project management: A methodology for sustainable competitive advantage. *Revista Escuela de Administración de Negocios*, (84), 15–31. <https://doi.org/10.21158/01208160.n0.2018.2016>
- 5) Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning. (Crucial reference for the statistical processing step of your methodology)
- 6) Heerkens, G. R. (2007). Introducing the strategic project management model. *PM Network*, 21(9), 24–27.
- 7) Hillson, D. (2017). *Managing risk in projects* (2nd ed.). Routledge.
- 8) Kerzner, H. (2019). *Using the project management maturity model: Strategic planning for project management* (3rd ed.). John Wiley & Sons.
- 9) Koppenjan, J., & Klijn, E. H. (2004). *Managing uncertainties in networks: A network approach to problem solving and decision making*. Routledge.
- 10) Kutsch, E., & Hall, M. (2010). Deliberate ignorance in project risk management. *International Journal of Project Management*, 28(3), 245–255. <https://doi.org/10.1016/j.ijproman.2009.05.003>
- 11) Nasreddine Ali Algremazy, Ideris, Z., Alferjany, M. A., & Akram, A. (2023). The effect of risk management practices on project performance: A case study of the construction industry. *International Journal of Professional Business Review*, 8(6), e01420. <https://doi.org/10.26668/businessreview/2023.v8i6.1420>
- 12) Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK guide)* (7th ed.). Project Management Institute.
- 13) Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education. (The absolute source for your 'Research Onion' structural breakdown)

- 14) Serrador, P., & Turner, R. (2015). The relationship between project success and project efficiency. *International Journal of Project Management*, 33(1), 30–39. <https://doi.org/10.1016/j.ijproman.2014.03.011>
- 15) Testorelli, R., Tiso, A., & Verbano, C. (2024). Value creation with project risk management: A holistic framework. *Sustainability*, 16(2), 753. <https://doi.org/10.3390/su16020753>
- 16) Zwikael, O., & Ahn, M. (2011). The effectiveness of risk management: An analysis of project management expertise across industries and countries. *Long Range Planning*, 44(1), 25–45. <https://doi.org/10.1016/j.lrp.2010.12.001>