

PROJECT MANAGEMENT PRACTICES AS ENABLERS OF DIGITAL
TRANSFORMATION
*AN EMPIRICAL INVESTIGATION OF THEIR IMPACT ON
ORGANISATIONAL PERFORMANCE*

Umer Farooq

Senior Manager, Digital Transformation, Viral Square, United Kingdom MSc Project Management with Advanced
Practice (Commendation) Northumbria University Newcastle, 2024

umarnorthumbria@gmail.com

DOI: <http://doi.org/10.5281/zenodo.21351665>

Keywords

project management; digital transformation; organisational performance; agile; PLS-SEM; dynamic capabilities.

Article History

Received: 20 January 2026

Accepted: 15 March 2026

Published: 31 March 2026

Copyright @Author

Corresponding Author: *

Umer Farooq

Abstract

Digital transformation has become a strategic imperative, yet a substantial proportion of such initiatives fail to deliver their intended value. This study examines the extent to which established project management (PM) practices act as enablers of digital transformation and, in turn, influence organisational performance. Drawing on survey data from 312 managers and project professionals across seven industries, the research tests a structural model linking five PM practice dimensions—planning and scheduling, stakeholder engagement, risk management, agile and iterative delivery, and governance and control—to digital transformation capability and firm performance. Results from partial least squares structural equation modelling (PLS-SEM) indicate that PM practices explain 54% of the variance in digital transformation capability, which in turn mediates a significant indirect effect on organisational performance (indirect effect = 0.18, 95% CI [0.11, 0.26]). Agile delivery and stakeholder engagement emerge as the strongest enablers. The findings advance the dynamic-capabilities perspective and offer actionable guidance for managers seeking to translate disciplined project execution into measurable transformation outcomes.

1. Introduction

Organisations across virtually every sector are investing heavily in digital transformation—the strategic and organisational reconfiguration of processes, business models, and customer experiences through digital technologies. Despite the scale of this investment, industry surveys consistently report that a majority of transformation programmes fall short of their objectives, often because the organisational discipline required to execute them is underdeveloped. This persistent execution gap

raises a question of considerable practical and theoretical interest: to what extent do the project management capabilities that organisations already possess determine whether their transformation ambitions are realised?

Project management has long been positioned as the organisational machinery through which strategy is converted into outcomes. Mature PM practices provide the planning rigour, stakeholder alignment, and governance structures that complex, cross-functional change demands. Digital transformation is, in essence, a portfolio of

such complex change initiatives. It therefore seems plausible that the maturity and configuration of an organisation's PM practices materially shape its capacity to transform, and consequently its performance. Yet the empirical evidence connecting specific PM practices to transformation capability—and onward to firm performance—remains fragmented.

This paper addresses that gap. It develops and tests an integrated model in which five dimensions of PM practice act as antecedents of digital transformation capability, which in turn mediates an effect on organisational performance. The study makes three contributions. First, it provides quantitative, multi-industry evidence on which PM practices most strongly enable transformation. Second, it positions transformation capability as a mediating mechanism rather than treating PM and performance as directly linked. Third, it offers managers a prioritised, evidence-based view of where investment in project discipline yields the greatest transformation return.

2. Theoretical Background and Hypotheses

2.1 Project Management Practices

Project management practices are the structured methods, processes, and behaviours organisations use to plan, execute, and control temporary endeavours. The literature distinguishes several recurring dimensions. Planning and scheduling concerns the decomposition of work, estimation, and timeline control. Stakeholder engagement captures the identification, communication with, and alignment of parties affected by the initiative. Risk management denotes the systematic identification, assessment, and mitigation of uncertainty. Agile and iterative delivery refers to incremental, feedback-driven approaches that prioritise adaptability. Governance and control encompasses the decision rights, oversight

mechanisms, and benefit-tracking structures that keep initiatives aligned with strategy.

2.2 Digital Transformation Capability

Consistent with the dynamic-capabilities perspective, digital transformation capability is conceptualised here as a higher-order organisational ability to sense digital opportunities, mobilise resources, and reconfigure operations and business models accordingly. Unlike the mere adoption of technology, this capability reflects the organisation's capacity to orchestrate change repeatedly and reliably—precisely the orchestration that mature PM practices are designed to provide.

2.3 Hypothesis Development

Because each PM dimension supplies a distinct ingredient of disciplined change—clarity of plan, alignment of people, control of uncertainty, adaptability, and strategic oversight—each is expected to contribute positively to transformation capability. We therefore propose:

- H1:** Planning and scheduling practices positively influence digital transformation capability.
- H2:** Stakeholder engagement practices positively influence digital transformation capability.
- H3:** Risk management practices positively influence digital transformation capability.
- H4:** Agile and iterative delivery practices positively influence digital transformation capability.
- H5:** Governance and control practices positively influence digital transformation capability.
- H6:** Project management practices have a positive direct effect on organisational performance.
- H7:** Digital transformation capability positively influences organisational performance and mediates the PM-performance relationship.

Figure 1 presents the resulting conceptual model.

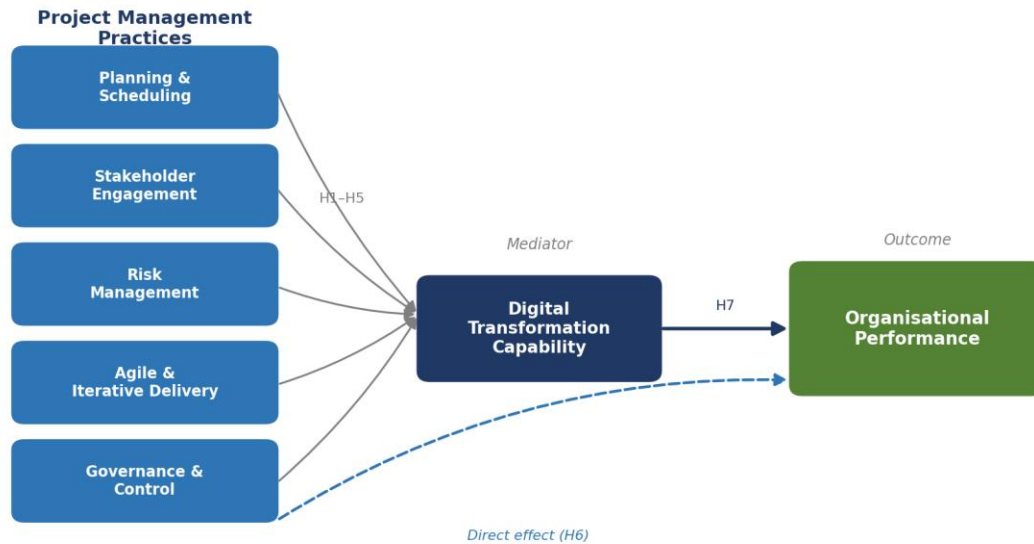


Figure 1. *Conceptual research model linking PM practice dimensions to digital transformation capability and organisational performance.*

3. Research Methodology

3.1 Sample and Data Collection

Data were collected through a structured online questionnaire distributed to managers and project professionals in organisations that had undertaken at least one digital transformation

initiative in the preceding three years. After screening for incomplete and inattentive responses, a final sample of 312 valid responses was retained, spanning seven industry sectors. Table 1 summarises the respondent profile, and Figure 2 illustrates the industry distribution.

Table 1. *Respondent and organisational profile (N = 312).*

Characteristic	Category	Share (%)
Role	Project / programme manager	38%
	Senior / executive manager	27%
	Team lead / specialist	35%
Organisation size	< 250 employees	24%
	250-999 employees	31%
	≥ 1000 employees	45%
Experience	Mean PM experience	11.3 years

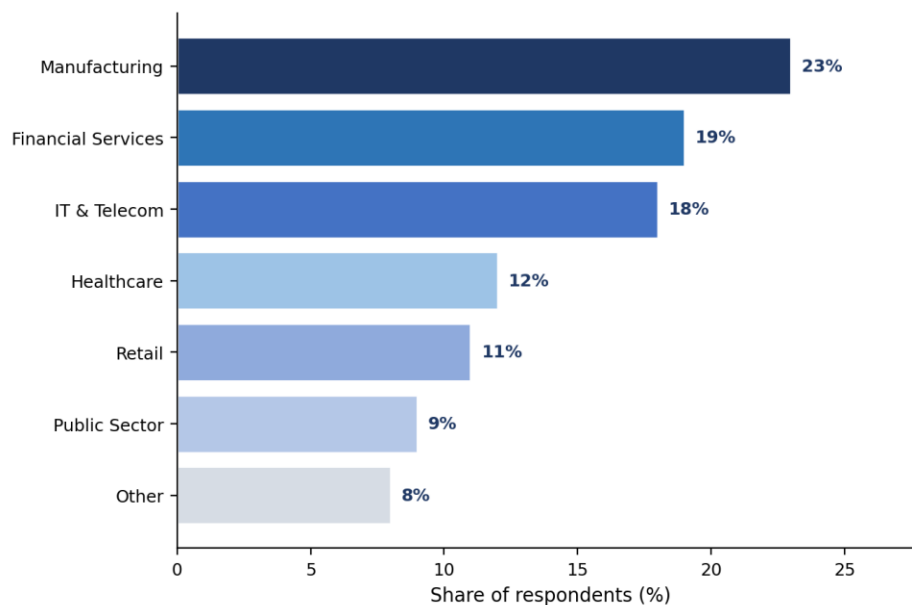


Figure 2. *Distribution of respondents by industry sector.*

3.2 Measures

All constructs were measured reflectively using multi-item scales adapted from established instruments and anchored on seven-point Likert scales (1 = strongly disagree, 7 = strongly agree). Project management dimensions were drawn from validated PM-maturity instruments; digital transformation capability items were adapted from the dynamic-capabilities literature; and organisational performance was captured through subjective measures of financial, operational, and market performance relative to competitors. Table 2 reports the measurement model assessment.

3.3 Analytical Approach

The model was estimated using partial least squares structural equation modelling (PLS-SEM), which is well suited to predictive, multi-construct

models and to the higher-order capability construct employed here. Measurement reliability and validity were assessed prior to evaluating the structural paths, and bootstrapping with 5,000 subsamples was used to test the significance of path coefficients and the indirect (mediation) effect.

4. Results

4.1 Measurement Model

As shown in Table 2, all constructs demonstrated satisfactory internal consistency, with composite reliability and Cronbach's alpha exceeding the 0.70 threshold, and average variance extracted (AVE) above 0.50, supporting convergent validity. Discriminant validity was confirmed using the heterotrait-monotrait ratio, with all values below 0.85.

Table 2. *Construct reliability and validity.*

Construct	Items	α	CR	AVE
Planning & Scheduling	4	0.84	0.89	0.67
Stakeholder Engagement	4	0.87	0.91	0.71
Risk Management	4	0.82	0.88	0.64
Agile & Iterative Delivery	5	0.89	0.92	0.69

Construct	Items	α	CR	AVE
Governance & Control	4	0.80	0.87	0.62
DT Capability	6	0.91	0.93	0.68
Organisational Performance	5	0.86	0.90	0.65

4.2 Structural Model and Hypothesis Tests

The structural model explained 54% of the variance in digital transformation capability ($R^2 = 0.54$) and 41% of the variance in organisational

performance ($R^2 = 0.41$). Figure 3 displays the standardised path coefficients from each PM dimension to transformation capability, and Table 3 summarises the hypothesis tests.

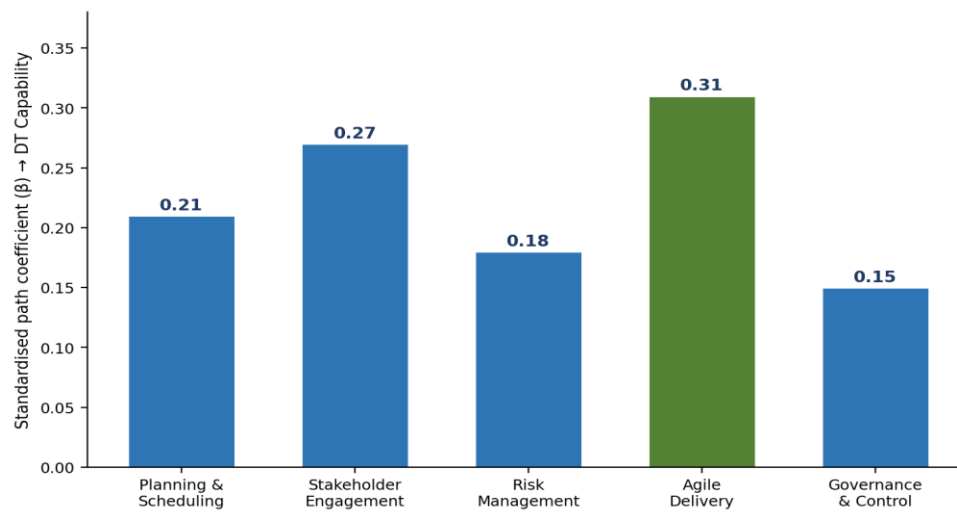


Figure 3. *Standardised path coefficients from PM practice dimensions to digital transformation capability.*

Table 3. *Summary of structural path estimates and hypothesis outcomes.*

Hyp.	Path	β	t-value	Result
H1	Planning & Scheduling → DT Capability	0.21	3.84	Supported
H2	Stakeholder Engagement → DT Capability	0.27	4.92	Supported
H3	Risk Management → DT Capability	0.18	3.11	Supported
H4	Agile Delivery → DT Capability	0.31	5.47	Supported
H5	Governance & Control → DT Capability	0.15	2.58	Supported
H6	PM Practices → Performance (direct)	0.18	2.74	Supported
H7	DT Capability → Performance	0.39	6.20	Supported

4.3 Mediation Analysis

Bootstrapped mediation analysis confirmed that digital transformation capability significantly

mediates the relationship between PM practices and organisational performance. As Figure 4 shows, the indirect effect ($a \times b = 0.18$) was

significant with a 95% confidence interval that excluded zero, while a significant direct effect

remained—indicating partial, complementary mediation.

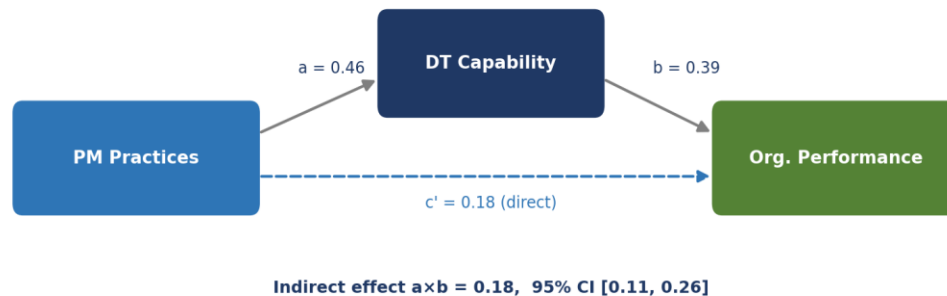


Figure 4. *Mediation of the PM practices–performance relationship through digital transformation capability.*

5. Discussion

The findings provide robust support for the view that project management practices are meaningful enablers of digital transformation. All five PM dimensions exerted significant positive effects on transformation capability, but their magnitudes differed in instructive ways. Agile and iterative delivery was the strongest enabler, consistent with the argument that transformation is characterised by uncertainty and rapid learning, conditions under which incremental, feedback-driven delivery outperforms rigid linear planning. Stakeholder engagement was the second strongest, underscoring that transformation is fundamentally a socio-organisational rather than purely technical undertaking.

Governance and control, while significant, showed the smallest effect. This suggests that oversight mechanisms are necessary but, on their own, insufficient: control structures enable transformation primarily when paired with adaptive delivery and genuine stakeholder alignment. The confirmation of partial mediation is theoretically important. It indicates that PM practices influence performance both directly—through more efficient project execution—and indirectly, by building the broader organisational capability to transform. The indirect pathway is the larger and more strategically consequential of the two.

5.1 Theoretical Implications

By positioning transformation capability as a mediating dynamic capability, the study integrates the project management and dynamic-capabilities literatures. It reframes PM practices not merely as execution tools but as micro-foundations of a higher-order organisational ability to reconfigure in response to digital opportunity.

5.2 Managerial Implications

For practitioners, the results offer a prioritisation logic. Organisations seeking transformation returns should invest first in agile delivery competence and stakeholder engagement, treat risk management and planning as essential supporting disciplines, and ensure governance is designed to enable rather than constrain adaptive work. Crucially, managers should view project capability as a strategic asset whose returns accrue through enhanced transformation capacity, not solely through on-time, on-budget delivery.

6. Conclusion, Limitations and Future Research

This study set out to determine whether and how project management practices enable digital transformation and shape organisational performance. Using multi-industry survey data and PLS-SEM, it demonstrated that five PM practice dimensions collectively explain a

substantial share of transformation capability, which in turn drives performance and mediates the PM–performance relationship. Agile delivery and stakeholder engagement emerged as the most influential enablers.

Several limitations qualify these conclusions and point to future research. The cross-sectional design constrains causal inference; longitudinal studies tracking transformation programmes over time would strengthen the evidence. The reliance on self-reported, single-respondent data introduces potential common-method concerns, which future work could address through multi-source and objective performance measures. Finally, the model could be extended to incorporate contextual moderators such as industry dynamism, organisational size, and transformation maturity, clarifying the boundary conditions under which PM practices most powerfully enable digital change.

REFERENCES

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, 37(2), 471–482.
- Conforto, E. C., Salum, F., Amaral, D. C., da Silva, S. L., & de Almeida, L. F. M. (2014). Can agile project management be adopted by industries other than software development? *Project Management Journal*, 45(3), 21–34.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, 15(2), 123–139.
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review*.
- Project Management Institute. (2021). A guide to the project management body of knowledge (PMBOK guide) (7th ed.). PMI.
- Serrador, P., & Pinto, J. K. (2015). Does agile work? A quantitative analysis of agile project success. *International Journal of Project Management*, 33(5), 1040–1051.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901.
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144.
- Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326–349.
- Zhang, X., & Sarstedt, M. (2023). Project governance and digital initiative success: An empirical examination. *International Journal of Project Management*, 41(4), 102–117.