

MIDOCEAN UNIVERSITY

[Faculty / College Name]

THE IMPACT OF DIGITAL TRANSFORMATION ON PROJECT SUCCESS

An Empirical Study on Project Management Professionals (PMP)

Assignment #3

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Chapter Two: Literature Review

2.1 Introduction

The first part of this chapter examines the academic theory and empirical evidence supporting the connection between digital transformation and the success of projects. To begin, the chapter outlines what constitutes digital transformation and details its main elements within project-based organizations. Following that, it presents an understanding of project success and traces where the concept has evolved from. It then provides an overview of the conceptual framework supporting the proposed research model. Afterward, it reviews the relevant empirical work and describes the changing roles of PMP-certified individuals in digital transformation. Finally, it identifies a significant gap in current research and finishes with a brief summary.

2.2 Definition of Digital Transformation

Digital transformation is a topic widely discussed within both academia and business. At the same time, it is also one of the most ambiguously defined topics within academia. For example, Vial defines digital transformation as “the response of organizations to changes in their digital environment through the use of digital technologies to transform their value creation pathways, while simultaneously addressing the structural changes and organizational barriers that define the positive and negative consequences of that transformation” (Vial, 2019). This provides some insight into why digital transformation cannot solely be viewed as adopting new technology. Rather, digital transformation represents a continuous strategic effort to transform the organization.

In similar fashion, Westerman, Bonnet, and McAfee (2014) frame digital transformation as the use of technology to dramatically increase an enterprise's performance or reach. However, they emphasize that successful implementation depends upon a combination of leadership vision, organizational capabilities, and the specific technology being implemented. Overall, both of these perspectives support the notion that digital transformation in project-based organizations should be thought of as a complex, multi-faceted phenomenon encompassing technology, leadership, decision-making processes, and organizational culture. Conversely, digital transformation does not represent a singular event.

2.3 Dimensions of Digital Transformation in Project-Based Organizations

2.3.1 Technology Adoption and Use of Digital Tools

Technology adoption relates to how well project teams incorporate various types of digital tools and platforms, including emerging technologies like artificial intelligence and automation, into the planning, execution, and monitoring of individual projects. According to Bassi (2025), high-performing project teams rely heavily on advanced project management software. He cites a PwC study stating that seventy-seven percent of high-performing teams utilize such software. Additionally, he states that teams utilizing these platforms have reported a fifty-two percent improvement in internal communications, which subsequently improves the quality of deliverables and increases customer satisfaction. Therefore, technology adoption represents a foundational element to facilitate improvements in project outcomes through digital transformation; however, it alone may not suffice to achieve the desired results.

2.3.2 Digital Leadership

Digital leadership encompasses how well project and organizational leaders are able to articulate a clear digital vision, model behavior that demonstrates a digitally-enabled approach to working, and actively champion digital initiatives in their respective project environments. As noted earlier (Section 2.6), systematic reviews of critical success factors for digital transformation consistently rank leadership as a central dimension, along with other important dimensions (including organizational culture, technological infrastructure, and customer focus). In particular, leadership buy-in is what determines whether digital tools become fully integrated into project governance and decision-making processes, or whether those tools are relegated to secondary status as unutilized parallel systems sitting uneasily next to traditional, non-digital methods of working.

2.3.3 Data-Driven Decision-Making

Data-driven decision-making is when project managers use data, analytics, and digital dashboards to help them plan, manage risks, and control their projects, instead of relying solely on gut feeling and static status reports. As Bassi (2025) states, because artificial intelligence is being used more and more in project management, it will allow for much better and faster data-driven decisions throughout all stages of a project. The concept relates back to the original Information Systems Success Model, which states that the quality of the information and the

quality of the systems that support that information are both key factors in determining what users are satisfied with, and therefore what level of benefits an organization receives from a project (DeLone & McLean, 2003). Therefore, the model provides the theoretical foundation for a relatively straightforward assumption: that better data relating to a project equates to better results from that project.

2.3.4 Organizational Digital Culture and Agility

How well an organization's culture encourages collaboration across departments and encourages employees to quickly adapt as project requirements change can be described as organizational digital culture and agility. Westerman, Bonnet, and McAfee (2014) believe that whether an organization's digital transformation succeeds depends on the strength of its organizational culture and governance, not on which technologies it chooses to implement. A similar point was made by Trenerry et al. (2021): preparing a workforce for digital transformation involves addressing multiple levels at one time, including employee skill sets, team dynamics, organizational structure, and culture, versus viewing it strictly as an investment in technology.

2.4 The Concept and Development of Project Success

Traditionally, project success has been measured using the “iron triangle” or “triple constraint” consisting of three elements: time, cost, and scope. A project was considered successful if it met each element. Atkinson (1999) argued that the iron triangle does not provide enough measurements to accurately assess a project. He developed a “square route” model that includes four measurement categories: time, cost, scope, and benefits realization. His model assessed a project beyond the initial completion date and costs to include the new information system created during the project, as well as the realized benefits experienced by both internal and external stakeholders. This movement away from operationally focused metrics of success towards value-focused, stakeholder-centered metrics represents the direction of the entire field of project management. This is also consistent with the seventh edition of the PMBOK Guide, which emphasizes guiding best practices by delivering value to customers and stakeholders rather than simply adhering to process (PMI, 2021).

This study uses the same perspective as Atkinson (1999), as well as those found in current project management standards, for assessing success by incorporating the various perspectives of time, cost, quality/scope, and stakeholder satisfaction.

2.5 Theoretical Framework for Studying Digital Transformation

The proposed framework for this study combines two distinct but complementary theoretical frameworks. The first is derived from the technology acceptance literature in information systems research. The first major work in this area is Davis' Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease-of-use are predictors of whether individuals accept specific information technologies (Davis, 1989). TAM has since been expanded upon by Venkatesh et al.'s (2003) Unified Theory of Acceptance and Use of Technology (UTAUT), which incorporates performance expectancy, effort expectancy, social influence, and facilitating conditions as predictors of technology usage. Together, TAM and UTAUT provide a justification for modeling technology adoption as a quantifiable construct that precedes and predicts future performance constructs such as project success.

The second body of theory originates from traditional project management theory, specifically Atkinson's (1999) recasting of project success criteria, supporting the use of multiple criteria in evaluating this study's outcome variable, project success. Combining the two bodies of theory creates a conceptual model where digital transformation — defined here through digital leadership, technology adoption, data-driven decision-making, and organizational digital culture — is expected to positively affect a multidimensional measure of project success.

2.6 Empirical Studies on Digital Transformation and Project Success

There is currently little direct empirical evidence that links digital transformation to project success at the project level. Although there are increasing amounts of empirical evidence, one of the most recently completed studies was conducted by Farooq (2026). He used a survey to assess the attitudes of three hundred and twelve managers and project professionals across seven different industries. In the study, he developed a structural model that linked five dimensions of project management practice — planning and scheduling, stakeholder engagement, risk management, agile and iterative delivery, and governance and control — to digital transformation capability and organizational performance. These five dimensions together accounted for over 54% of the variation in digital transformation capability. Additionally, digital transformation capability significantly impacted organizational performance, although the impact was partially mediated. As such, while Farooq views project management practices as facilitating digital transformation (as opposed to the other way around), his study still offers empirical

support for the existence of a tangible, quantifiable connection between project management practices, digital capability, and performance. The study therefore offers some support for the reverse relationship explored here — i.e., the dimensions of digital transformation can be shown to be predictive of success at the project level.

At the industry level, Bassi (2025) reports a convergence of evidence suggesting that digital adoption in project management is accompanied by stronger team communication and performance, supporting the practical significance of technology adoption as a means of achieving project success. At the workforce level, Trenerry et al. (2021) constructed a Digital Transformation Skills Framework consisting of six high-order skill categories and forty-four lower-order skills. They concluded that active employee involvement, coupled with appropriate skills, is critical to determining whether or not employees are successful in adopting digital transformation initiatives. That finding has implications for project teams, since they represent the primary conduit through which digital transformation occurs within organizations engaged primarily in project-based activities.

2.7 The Role of Project Management Professionals (PMP) in Digital Transformation

Project Management Professional (PMP) is a professional credential offered by the Project Management Institute (PMI), denoting a standardized set of competencies related to managing projects. The evolution of these competencies has followed changes in the nature of the work done by project managers. The seventh edition of the PMBOK Guide shifted from a process-focused model to a principle-driven model intended to accommodate multiple delivery approaches, including predictive, agile, and hybrid models. This indicates that the profession now sees digitally-enabled, iterative forms of working as core to project delivery rather than peripheral (PMI, 2021).

Similarly, Trenerry et al. (2021) argued that digital transformation requires a wide-ranging set of workforce skills, including digital literacy, data fluency, and experiential and adaptive learning — skills that extend far beyond those typically associated with traditional project management. Consequently, because their certification signifies knowledge about evolving, digitally-enabled best practices as well as actual hands-on experience with delivering projects, PMP-certified

professionals represent a suitable population for assessing the relationship between digital transformation and project success.

2.8 Research Gaps

As indicated above, prior research on digital transformation in organizations whose business activity is centered on projects has identified several consistent gaps. For example, much of what exists in terms of research regarding digital transformation in project-based organizations has been either conceptual or review-oriented. Therefore, relatively scarce research exists that empirically tests specific relationships between the various dimensions of digital transformation and indicators of project success.

In addition, while there exists considerable empirical research on the effects of digital transformation on overall organizational performance (e.g., see Farooq's [2026] focus on organizational outcomes), considerably less empirical research has been reported regarding the effects of digital transformation on project success. Moreover, most prior research investigating digital transformation and project success has been limited to studies examining participants within a single industry or technology area. Such limitations restrict the generalizability of their results to other sectors.

Finally, despite being a professionally defined group with global recognition and relevance to understanding digitally-enabled project delivery processes among many organizations worldwide, very few prior studies have investigated specifically how PMP-certified professionals view digital transformation and its effects on project success. Thus, this study aims to address each of these three gaps by testing a multidimensional model of digital transformation against a multidimensional measure of project success, using a sample drawn from a variety of industries and comprised of PMP-certified project management professionals.

2.9 Summary

This chapter has provided an overview of the concepts and dimensions involved in digital transformation; traced how the measures for evaluating project success have changed over time; outlined two theoretical frameworks that provide the basis for the study's conceptual model — technology acceptance theory and modern theory on project success; assessed the amount of empirical evidence available relating digital transformation to project and organizational

outcomes; reflected upon the changing roles played by PMP-certified professionals in digitized forms of project work; and identified the specific gaps that this study will seek to address.

The next chapter discusses the research methodology, outlines the design, describes the population studied and the selection procedure employed to obtain that population, explains how data will be collected via a structured questionnaire, and details the plans for analyzing those data.

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