

DOES SUSTAINABLE PROJECT MANAGEMENT DRIVE PROJECT SUCCESS? A SYSTEMATIC REVIEW OF THE EVIDENCE, ITS CONTEXTUAL BOUNDARIES, AND A FUTURE RESEARCH AGENDA

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Abstract

Although SPM is now considered one of the major areas of concern within the discipline of PM, there is still no firm conclusion regarding whether the degree to which sustainability is considered during the development of a project facilitates success. This article presents results from an SLR that followed PRISMA 2020 guidelines in order to address this question. An SLR was used to review the existing literature on sustainability and project success in order to establish whether there is an association between the two. The SLR identified 12 empirical studies published between 2016 and 2023, which met the eligibility criteria established for the review. The 12 studies were synthesized thematically into two (2) themes. The first theme is that all of the included studies report a positive correlation between SPM and PS. Moreover, the direction of the reported relationship is consistent across all theoretical lenses, industries, and geographic regions, resulting in the finding that the relationship between SPM and PS is one of the most consistently documented main effects in the PM literature and is therefore presumed to be robust and mostly independent from the context in which the project occurs. The second theme is that the reviewed studies also have a common set of limitations that raise questions about the generalizability of the conclusions reached. These limitations include small, non-probability samples; reliance on self-reported and cross-sectional data; heavy concentration on construction industry; and insufficient attention given to the mediating and moderating variables that would be necessary to adequately account for how the association between sustainability and success occurs. Therefore, based on the findings of this research study, several future research directions are outlined (e.g., larger and more representative sample sizes; using better experimental designs; replicating studies in different settings; and exploring moderating and mediating factors). Ultimately, this research adds to the body of knowledge and aids in understanding how sustainability practices contribute to successful projects and provides researchers with many opportunities to further develop the theoretical framework and practical application of sustainability in project management.

1. INTRODUCTION

Organizations rarely deliver strategic change through routine operations; they deliver it through projects. Projects concentrate resources, mobilize teams, and reshape the environments and communities around them, which is precisely why the management of projects has become a central management discipline rather than a purely technical one (Turner, 2016; Project Management Institute, 2017). By some estimates, project-based activity accounts for roughly a fifth of global economic output and an even larger share in fast-growing economies (Turner et al., 2013). As the social, economic, and ecological pressures on organizations intensify, the way projects are conceived and governed has therefore become a question of considerable consequence (Martens & Carvalho, 2017).

Sustainability is now seen as being a structural principle of modern management and has moved to the center of the agenda. Academic research and policy development continue to be influenced by the Brundtland definition (the meeting of current needs, without denying the ability of future generations to meet their needs), as set out in the World Commission on Environment and Development report (1987) and supported by Kleindorfer, et al. (2005) through research. This agenda was formally introduced by the International Project Management Association (IPMA) when they added sustainability to their program in 2008 and since then a consistent flow of projects have made the case that projects are one of the greatest tools at organizations' disposal for changing corporate outcomes in a more sustainable direction. (Huemann & Silvius, 2017; Marcelino-Sádaba et al., 2015). The increasing demands of regulating bodies, the constantly changing technology, an increasing number of competitors and the changing expectations of clients and the public have all compelled firms to be sustainable in how they plan and execute work (Toljaga-Nikolić et al., 2020; Moehler et al., 2018; Larson et al., 2018). The result of this convergence is the new field of sustainable project management (SPM) which is a stream of inquiry that is becoming more and more recognized (Hasheminasab et al., 2020; Silvius, 2017). The

empirical studies show that there is a positive relationship between SPM and project success (PS) (Wafra et al., 2023; Carvalho & Rabechini, 2017; Shaukat et al., 2022). This is a pretty nice ending, because it implies that being responsible and being successful don't have to clash. However, it is not obviously a one-to-one correspondence. The shift towards long-term sustainability runs the risk of being conflictive with the finite and bounded nature of projects (Silvius, 2012; Eid, 2014) and may extend the system boundaries of project management, which can lead to difficulties with cost and/or schedule performance. Implementing sustainability can involve higher initial costs, can be more complex to plan, can involve more stakeholders, and can have additional overhead and coordination costs (Pearce, 2008; Hwang & Ng, 2013). This means that the empiricism is optimistic, and the theory is cautious; the two are in tension, which is not usually explained in any one study. Then there is a more profound issue about the accumulation of evidence. In one setting after another, the field has generally re-confirmed the same headline finding: SPM correlates positively with PS, while the more challenging questions remain largely untouched, as the number of empirical studies has increased. How this relationship works is rarely explained (via which intervening mechanisms); when it is strong or weak (where are the boundary conditions); whose (project types, sectors, cultures). This trend is also observed in reviews that have attempted to summarize what has happened in the region: the direction of the effect is known, but its underlying explanations and boundaries are not (Khalifeh et al., 2020; Armenia et al., 2019; Orieno et al., 2024). In other words, the literature has a risk of entering into a vicious circle of volume without cumulative insight. This review addresses this situation. Instead of re-asking the question of whether SPM 'works', it asks what the empirical record reveals so far and what can be done differently – and where – to contribute most. The work is guided by 2 questions:

RQ1. How does the existing empirical literature frame the relationship between SPM practices and overall project success, and how robust is that

relationship across theoretical, sectoral, and national contexts?

RQ2. What are the principal limitations of this literature, and how can they be organized into an actionable agenda for future research?

To respond to them, we use a systematic literature review according to the PRISMA 2020 protocol (Page et al., 2021) and thematize the included studies based on thematic analysis (Braun & Clarke, 2006). Its contribution is three-fold. First, we offer a current and open review of the direction of the SPM-PS relationship and show that this relationship is consistent with a carefully selected set of contexts that is heterogeneous. First, we offer a current and open review of the direction of the SPM-PS relationship and show that this relationship is consistent across a carefully selected set of contexts that is heterogeneous. Second, we go beyond a mere tally of votes by tracing the contextual architecture of evidence: its theory, industries, and country contexts, and systematically categorizing its weaknesses. We take this diagnosis and build it into a research program organized by mechanisms, contexts, and methods, creating clear direction for scholars and practitioners to inform them about future directions for the field (Aarseth, 2017; Sabini, 2019).

The remainder of the paper is organized as follows. It is Section 2 that builds on the conceptual background, namely the definition of the project management, sustainability, SPM and PS and the research gap is defined. Section 3 describes the review method. Section 4 reports the descriptive and thematic results. Section 5 discusses what the findings mean for theory and practice, reading them against the most recent literature. Section 6 concludes, acknowledges the limitations of the review itself, and sets out the future research agenda.

2. Conceptual Background

2.1 Project Management and the Emergence of a Sustainability School

Projects are temporary endeavors undertaken to bring about beneficial change, such as the delivery of a new product, service, or capability; project management is the structured discipline through which that change is realized (Turner, 2016;

Project Management Institute, 2017). As the tasks organizations face have grown more ambiguous and complex, reliance on professional project management has deepened, and the field has matured into a recognized area of scholarship informed by several distinct intellectual traditions (Gareis, 2006; Biedenbach & Müller, 2011). Turner and colleagues famously distilled this diversity into nine 'schools' of project management thought, while noting that the field remains open to new schools as it increasingly draws on, and contributes to, the wider management literature (Turner et al., 2013). Reviews of conference and journal output have since identified sustainability as the most prominent of these emerging schools (Silvius, 2017; Pasian & Silvius, 2016). SPM, on this reading, is not a passing fashion but a candidate paradigm that reframes what project management is ultimately for.

2.2 Sustainability and Its Competing Models

Sustainability is a concept that's in the old language, but now in a new one. While acquired policy did not become prominent until the late 20th century, the question of establishing conditions for the ongoing thriving of human societies is much older (Becker, 2023). And the idea is highly multiplicitous; thus, by the count of Parkin et al. (2003) there are over two hundred different material definitions of sustainable development in circulation. It has context-dependent significance. Sustainability is typically defined in wealthy economies by the 'green agenda' of protecting ecosystem and conserving resources for the future, while many of the developing economies are facing a more urgent 'brown agenda' of poverty alleviation, health care and provision of basic services, and the transitional economies fall in between (Du Plessis, 2007; Kibert et al., 2011). For all this variety, the most influential operationalization remains Elkington's triple bottom line (TBL), which holds that durable value is created only when economic, environmental, and social performance are pursued together (Elkington, 1998; Gladwin et al., 1995; Sarwar et al., 2025). Table 1 summarizes

several of the models that have shaped how sustainability is conceptualized.

Table 1. Influential conceptual models of sustainability.

Model	Dimensions	Source
Triple Bottom Line	Economic, environmental, social	Elkington (1998)
Egg of Sustainability	Human well-being, ecosystem well-being	Guijt & Moiseev (2001)
Russian Doll / Bull's-eye model	Environment, society, economy	Levett (1998)
Prism of Sustainability	Institutional, economic, social, environmental	Stenberg (2001)
Five-Capital Framework	Natural, human, social, manufactured, financial	Spangenberg & Bonniot (1998); Parkin et al. (2003)

2.3 Sustainable Project Management

Efforts to embed sustainability across management domains have been under way since at least the 1970s, and project management has been a natural target because projects are widely regarded as ideal vehicles for change (Marcelino-Sádaba et al., 2015). Because projects consume substantial resources and interact directly with their host environments, integrating sustainability into how they are managed has a disproportionate potential impact: a sizeable share of global GDP passes through projects (Økland, 2015). SPM is therefore best understood not as an add-on but as a reorientation of the management task itself, in which sustainability and project delivery are treated as interdependent rather than competing objectives (Aarseth et al., 2017; Daneshpour, 2015).

SPM differs from traditional project management in several respects, summarized in Table 2. Conventional practice focuses on providing a defined outcome within a given time frame, scope and budget, while the 'iron triangle' SPM has a longer timeframe to consider, balancing the needs and interests of both present and future stakeholders, and taking into account the triple bottom line of people, planet and profit as well as the classic constraints of time, scope and budget (Martens & Carvalho, 2017; Toljaga-Nikolić et al., 2020). But the wider scope of responsibilities also creates a greater challenge to manage, and advocates of its use say the challenge is worth it for operational efficiency, goodwill and robustness over time (Kivilä et al., 2017). Table 3 traces how scholars have defined SPM as the construct has matured.

Table 2. Distinguishing traditional project management from sustainable project management.

Characteristic	Traditional PM	Sustainable PM
Time horizon	Short term	Short and long term
Interest orientation	Primarily the sponsor	Present and future generations
Orientation of value	Deliverable / result	Whole project life cycle
Core concerns	Time, scope, budget	Triple bottom line: people, planet, profit
Relative complexity	Lower	Higher

Table 3. Selected definitions of sustainable project management.

Source	Definition
Tam (2010)	The deliberate coordination of interrelated projects to maximize positive and minimize negative sustainability impacts, contributing to a sustainable society.

Silvius & Schipper (2014)	The management of project delivery and support processes—planning, monitoring, and control—while accounting for economic, environmental, and social factors across the full life cycle.
Aguilar-Fernández et al. (2015)	An approach that foregrounds the integration of environmental and social sustainability factors into the project management function.
Martens & Carvalho (2016)	The integration of sustainable practices into project management, including efficient use of natural resources, waste reduction, sustainable sourcing, stakeholder engagement, transparency, and accountability.
Kivilä et al. (2017)	Project management understood as a key vehicle for adopting sustainability, where embedding sustainability is essential to effective delivery and to achieving project success.
Sabini et al. (2019)	A multifaceted construct applying social, environmental, and economic considerations to the practice of managing projects.
Shaukat et al. (2022)	An approach that recognises the broader impacts of projects and seeks balance across the people-planet-profit triad through a holistic management practice.

2.4 Project Success: From the Iron Triangle to Multidimensional Outcomes

How success is defined matters for any claim that SPM enhances it. For decades the dominant view equated project success with meeting the constraints of cost, time, scope, and quality—the ‘golden triangle’ that underpinned early editions of the PMBOK Guide (Lim & Mohamed, 1999). That view always sat uneasily with experience: projects such as the Sydney Opera House overran on time and cost yet are remembered as triumphs, which suggests that outcome matters as much as conformance (Shenhar et al., 2001; Sarwar et al., 2025). Contemporary scholarship therefore treats

project success as a multidimensional construct that adds stakeholder satisfaction, client benefit, organizational learning, and broader societal value to the traditional efficiency criteria (Müller & Turner, 2007; Serrador & Turner, 2015). Table 4 summarizes this evolution. The shift is consequential for the present review: because SPM is itself concerned with stakeholders, life-cycle impact, and social value, the broadening of success criteria has arguably made the two constructs more conceptually aligned, which may partly explain the consistency of the empirical relationship documented later (Yan et al., 2019).

Table 4. The evolving conceptualization of project success.

Source	Conception of project success
De Wit (1988); Atkinson (1999)	Success assessed mainly against the iron triangle of cost, time, and quality/scope.
Shenhar et al. (2001)	A multidimensional strategic concept; the iron triangle is necessary but not sufficient.
Shenhar & Dvir (2007)	Five dimensions: efficiency, customer impact, team impact, business success, and future readiness.
Ika (2009)	Three perspectives—universal critical success factors, contingent criteria specific to a project, and subjective perceptions of success and failure.
Serrador & Turner (2015)	Driven by triple-constraint efficiency, stakeholder requirements, and client satisfaction.
Albert et al. (2017)	Success criteria spanning performance, time, cost, economic success, and quality across domains.
Ika & Donnelly (2017)	Commitment, collaboration, alignment, and adaptation among stakeholders as conditions for success.

Fareed et al. (2022)

Categorized as project investment, project ownership, and project management success.

2.5 The Research Gap

This field lacks a consolidated findings that not only records the direction of the relationship but also organizes its weaknesses into a usable forward agenda. Recent literature reviews and conceptual frameworks are now suggesting needing precisely this type of consolidated evidence to conduct systematic literature reviews (SLRs) that use a contextual map of the evidence and structured classification of key limitations; however, these types or hybrid types of SLRs remain very few (Armenia et al., 2019; Orieno et al., 2024; Chofreh et al., 2019). Therefore, the purpose of this research is to provide the evidence for and support in developing consolidated and integrated review methods to address the current gap in available SLRs.

3. Materials and Methods

3.1 Review Design

The main method chosen for conducting this study was systematic literature review because the research questions require a broad scope and an ability to repeat and have transparency in results through synthesis of existing knowledge, rather than collecting primary data from one setting. Unlike a narrative review, an SLR follows a structured, auditable protocol that limits selection bias and makes the basis for every inclusion and exclusion decision visible (Newman & Gough, 2020; García-Peñalvo, 2022). Since sustainability is an evolving and diverse area in project management (Ferrerías-Fernández et al., 2016;), a systematic review is appropriate, as it enables the integration of results from different research methods and highlights differences in research results. The systematic review was performed following the systematic review methodology developed by Kitchenham (Kitchenham, 2004) and was reported in accordance with the PRISMA 2020 guidelines (Page et al., 2021).

3.2 Search Strategy and Databases

The two constructs central to the research question or hypothesis created the basis for formulation of the search query. The first construct (sustainable project management) was operationalized by the keywords 'sustainable', 'sustainability', 'sustainable project management', 'sustainable development', and 'SPM'. The second construct (project success) was operationalized through the terms 'project success', 'project management success', 'PS', and 'project performance'. Boolean operators were utilized to join the terms both across and within the constructs according to well-established conventions for literature reviews (Marcelino-Sádaba et al., 2015; Silvius and Schipper, 2014). Google Scholar was the primary search engine used for this work and the reference lists from all articles selected for inclusion in the review were screened using backward citation chaining to identify additional candidate studies. As the credibility of the review increases with the number of databases from which articles are collected (Jones, 2004; Sarwar et al., 2024), only articles from Scopus were included in the final review, with the vast majority of the included studies sourced from ScienceDirect, Emerald Insight, Wiley Online Library, and MDPI.

3.3 Eligibility Criteria

The criteria shown in Table 5 were set in advance to maintain the quality, relevancy and methodical quality of the corpus. In short, the review was limited to empirical articles written in English published from 2014 to 2024 that examined the relationship between SPM and project success. Non-empirical articles; grey literature; duplicates; and studies that did not directly relate to the SPM and project success relationship were excluded from this review.

Table 5. Inclusion and exclusion criteria.

Criterion	Specification
Relevance (include)	Studies that empirically assess the relationship between SPM and project success.
Study type (include)	Empirical studies—quantitative, qualitative, or mixed-methods.
Source quality (include)	Articles published in peer-reviewed, Scopus-indexed journals.
Language (include)	English-language articles.
Recency (include)	Articles published within the last ten years (2014–2024).
Topic (exclude)	Articles not focused on SPM practices and project success.
Study type (exclude)	Opinion pieces, editorials, commentaries, reviews, and conceptual papers without empirical data.
Source (exclude)	Dissertations, theses, and grey literature.
Redundancy (exclude)	Duplicate publications or multiple versions of the same study.
Language (exclude)	Non-English articles, owing to translation constraints.

3.4 Study Selection and the PRISMA Flow

The selection process followed the PRISMA framework and is depicted in Figure 1. The search returned approximately 17,800 records. Title-level screening removed 16,820 records as clearly irrelevant, and a further 726 were excluded because the publishing journal was not Scopus-indexed, leaving 254 records to be sought

for retrieval. Fifty-two reports could not be retrieved, so 202 full texts were assessed against the eligibility criteria. At this stage 78 were excluded as non-empirical and 112 because they did not examine the SPM–PS relationship directly. Twelve studies satisfied every criterion and formed the corpus for thematic synthesis.



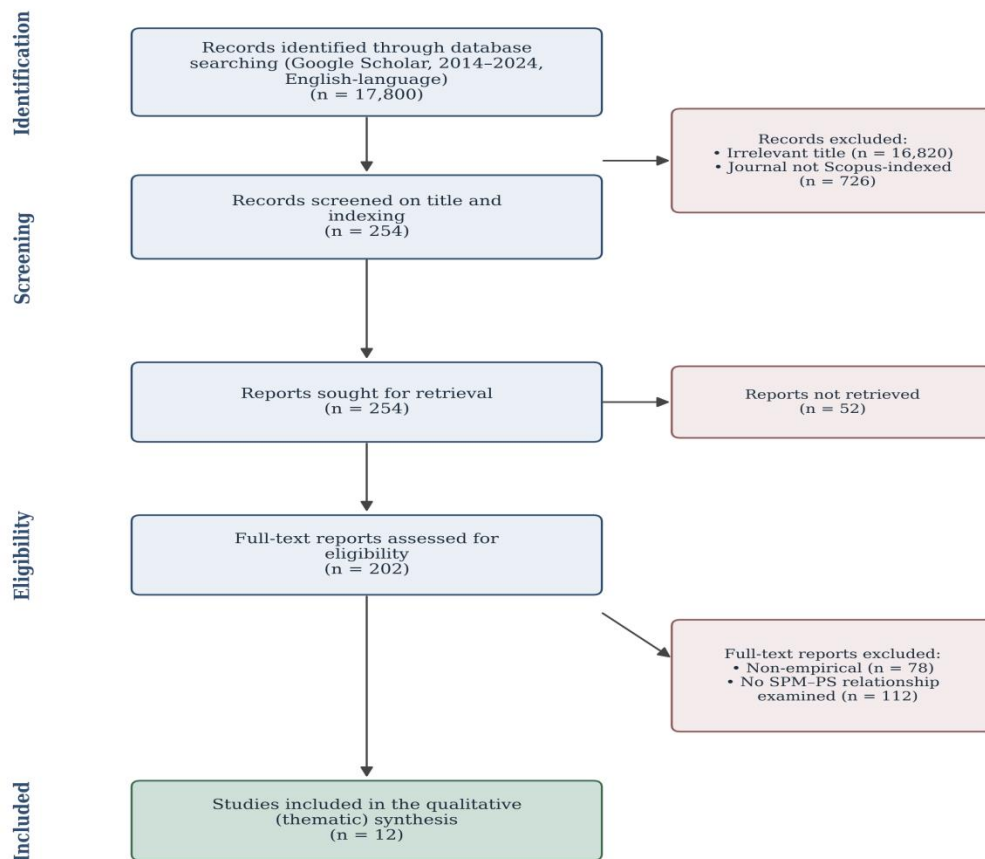


Figure 1. PRISMA 2020 flow diagram of the study identification, screening, and selection process.

3.5 Data Analysis

Thematic analysis was used to synthesize the corpus because it offers a systematic yet flexible means of identifying and interpreting patterns of meaning across a heterogeneous qualitative dataset (Braun & Clarke, 2006; Sarwar et al., 2023). It is particularly appropriate to review contexts where the aim is to distil cross-study patterns rather than to compute a statistical pooled estimate. The analysis proceeded through five iterative stages: data extraction from each study; initial coding of contextual and substantive features; generation of candidate themes; refinement of those themes against the full corpus; and interpretation. Two themes were developed. Theme 1 concerns the direction of the SPM-PS relationship and the contextual

factors against which it was examined; Theme 2 concerns the limitations that recur across the evidence base. The full characteristics of the twelve studies are tabulated in Appendix A, and their methods, findings, and recommendations are summarized in Appendix B.

4. Results

There are two sections to this report: (1) Descriptive analysis of the corpus, wherein the studies have been described by their source of publication, date of publication and visibility as scholarly works; and (2) Thematic analysis of the data addressing the two research questions.

4.1 Descriptive Overview of the Corpus

The 12 studies reviewed appeared in a variety of publications (Figure 2), with increasing interest in the field of the relationship between SPM and PS. The most common type of study was found to be from MDPI journals and ScienceDirect publications (4 articles each). The remaining work was published in well-cited journals, such as PLOS ONE and Industrial Engineering and

Management Systems (with two studies), Emerald Insight and Wiley (one study each). The distribution of studies by the different publishers and different fields of research indicates that the research on the SPM-PS relationship has received the attention of a wide academic arena and is not restricted to a specific journal category and/or field of research.

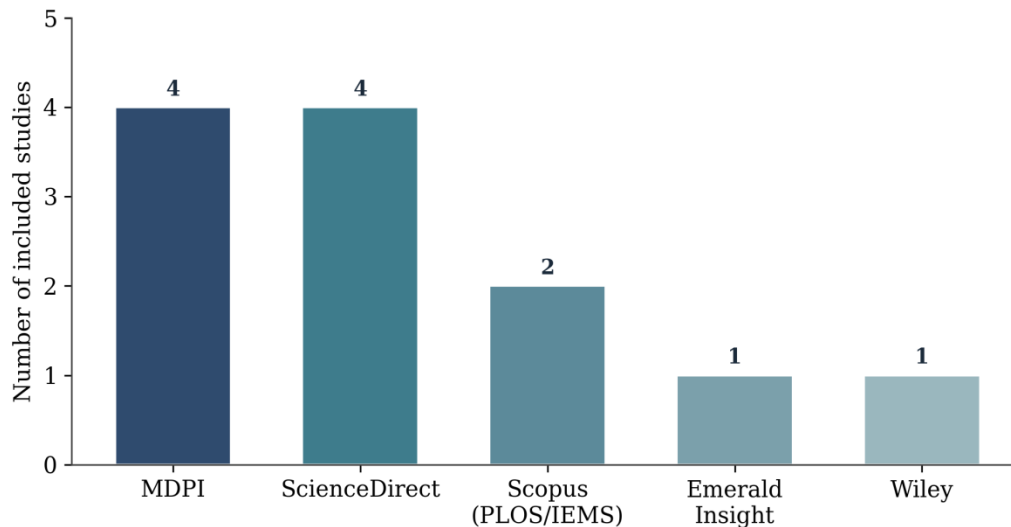


Figure 2. Distribution of the included studies by publication source.

The temporal pattern (Figure 3) indicates a rising rather than a declining interest in the empirical relationship. Following a small and inconsistent production from 2016 to 2022, four of the 12 studies were published in 2022. The Impact of this small but important literature is clearly

reflected in the number of citations that the corpus receives: At the time of the review the top three cited papers were Banihashemi et al. (2017) with nearly 500 citations, followed by Carvalho and Rabechini (2017) and Mavi and Standing (2018) with well over 300 citations each.

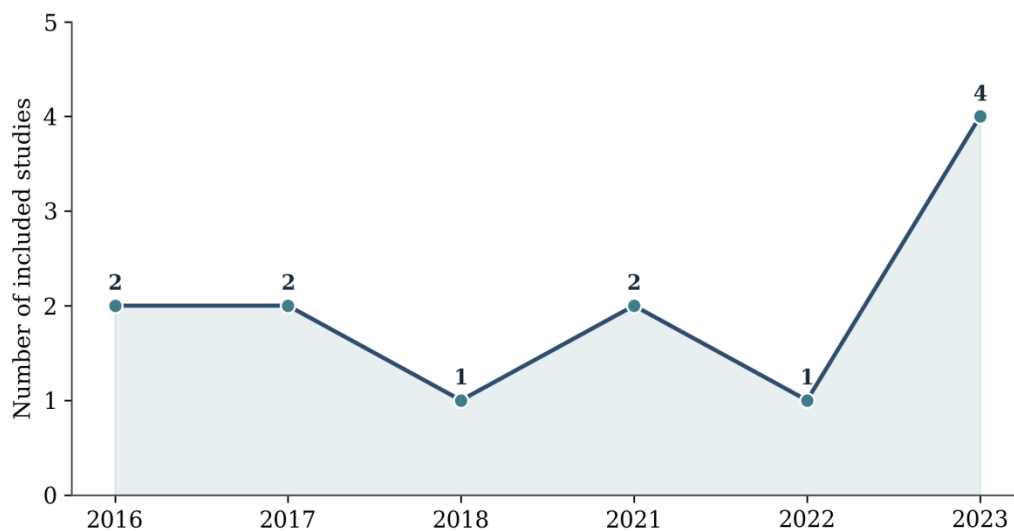


Figure 3. Publication year of the included studies.

4.2 Theme 1: The Direction and Context of the SPM-PS Relationship

The most eye-catching finding is also the most straightforward: all of the 12 studies show a positive correlation between SPM and project success. None of the studies reported a negative

or null association. What makes this notable is the heterogeneity of the settings in which the finding recurs, summarized in Table 6 along three contextual dimensions—theoretical framework, industry, and country.

Table 6. Context and direction of the SPM-PS relationship across the included studies.

Study	Theoretical framework	Industry / country	Direction
Banihashemi et al. (2017)	Innovation diffusion; TBL	Construction / Iran	Positive
Khalilzadeh et al. (2016)	Triple bottom line	Oil & gas / Iran	Positive
Martens & Carvalho (2016)	Triple bottom line	Public, chemical, automotive / Brazil & USA	Positive
Carvalho & Rabechini (2017)	Triple bottom line	Eight sectors / Brazil & Peru	Positive
Mavi & Standing (2018)	Triple bottom line	Construction / Australia	Positive
Chow et al. (2021)	Triple bottom line	Manufacturing / Malaysia	Positive
Klaus-Rosińska & Iwko (2021)	Stakeholder theory	Construction (SMEs) / Poland	Positive
Shaukat et al. (2022)	RBV; stakeholder theory	Construction, IT, telecom / Pakistan	Positive
Blak Bernat et al. (2023)	Triple bottom line	Technology / telecom / Brazil	Positive
Phung et al. (2023)	Triple bottom line	Construction / UK	Positive
Wu et al. (2023a)	RBV; stakeholder theory	Construction / China	Positive

Wu et al. (2023b)

Institutional theory; RBV

Construction / China

Positive

Reading down the three columns reveals both the breadth of the evidence and its concentration. Theoretically (Figure 4), the triple bottom line dominates, appearing in two-thirds of the studies, with the resource-based view and stakeholder theory forming a secondary cluster and

institutional and innovation-diffusion lenses appearing once each. The recurrence of the result regardless of lens suggests that the positive relationship is not an artefact of any single theory.

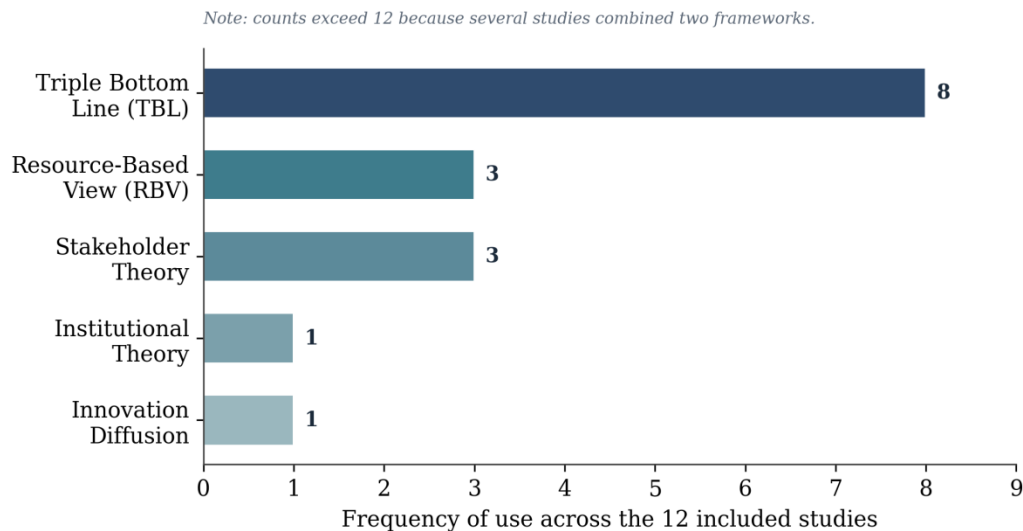


Figure 4. Theoretical frameworks used to examine the SPM-PS relationship (counts exceed twelve because several studies combined two frameworks).

The industry distribution of the corpus is skewed with construction being present in about half the studies, as it is a resource-intensive sector with a visible impact on the environment, whilst the other industries are fairly thinly spread: manufacturing, oil and gas, telecommunications, technology, and projects in the public sector. Geographically (Figure 5), the studies cover both

developed and developing economies ranging from Brazil, Iran, China, Pakistan, Malaysia, Poland, Australia, United Kingdom, United States to Peru. On the surface this international spread lends the finding external validity; we return below to the question of whether it does so as strongly as it first appears.

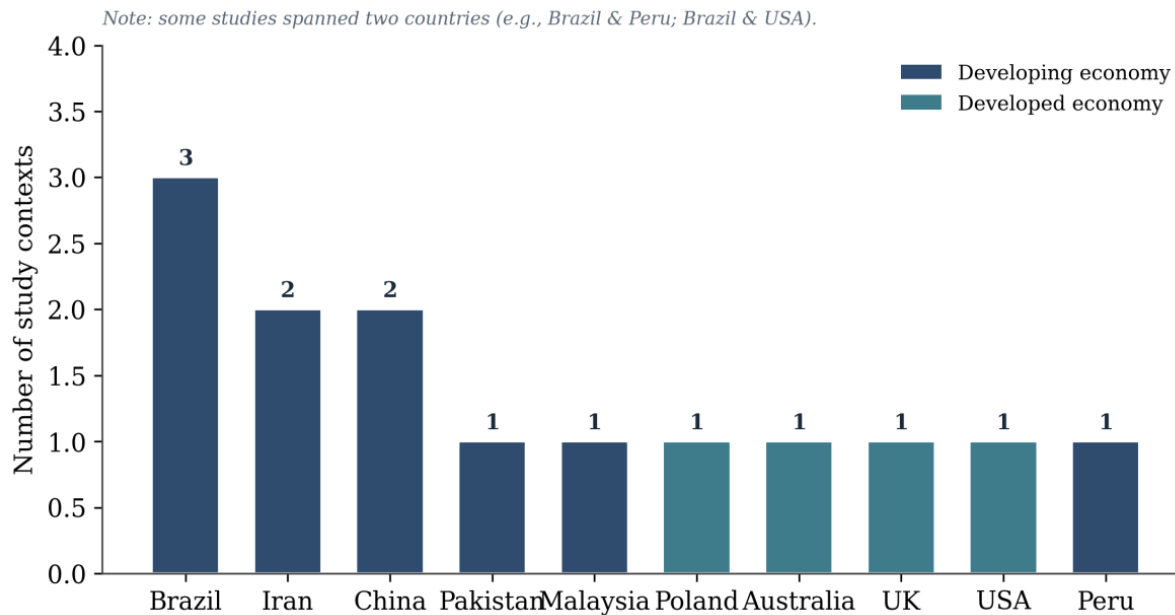


Figure 5. National context of the included studies, by economy type.

Taken together, the Theme 1 evidence answers RQ1 clearly. Across theories, sectors, and countries, implementing SPM practices is consistently associated with improved project outcomes. The relationship behaves less like a context-specific contingency and more like a robust main effect—a point with both encouraging and cautionary implications, developed in Section 5.

4.3 Theme 2: Limitations Recurring across the Evidence Base

If the studies agree on their headline result, they also share a strikingly similar set of weaknesses. Coding the limitations reported in, and evident from, the twelve studies produced five recurring categories, summarized in Table 7.

Table 7. Categorization of limitations across the included studies.

Category	Nature of the limitation	Illustrative studies
Sample size	Small samples and thin representation of stakeholder roles, constraining reliability and validity.	Banihashemi et al. (2017); Blak Bernat et al. (2023); Chow et al. (2021); Khalilzadeh et al. (2016)
Generalizability	Findings tied to a narrow band of project types (often construction) and specific settings.	Phung et al. (2023); Klaus-Rosińska & Iwko (2021); Mavi & Standing (2018)
Methodology	Self-reported and cross-sectional data, non-probability sampling, and ex-post-facto designs.	Carvalho & Rabechini (2017); Wu et al. (2023b); Martens & Carvalho (2016)
Context dependence	Results shaped by single-country or single-economy conditions that limit transfer.	Shaukat et al. (2022); Mavi & Standing (2018); Blak Bernat et al. (2023)
Narrow focus	Exclusive attention to the direct SPM-PS link, omitting mediators and moderators.	Wu et al. (2023a); Blak Bernat et al. (2023)

The first cluster concerns sample size. Many studies rely on modest samples that under-represent the full range of project stakeholders, which limits the confidence that can be placed in their estimates (Banihashemi et al., 2017; Blak Bernat et al., 2023; Chow et al., 2021; Khalilzadeh et al., 2016). The second concerns generalizability: because so much of the work is set in construction and in particular national or sectoral conditions, transferring the conclusions to other domains is hazardous (Mavi & Standing, 2018; Klaus-Rosińska & Iwko, 2021). The third is methodological. Cross-sectional, self-reported designs and non-probability sampling recur throughout, raising the familiar risks of common-method bias and limited causal inference, while subjectivity in how performance is judged compounds the problem (Carvalho & Rabechini, 2017; Wu et al., 2023a; Martens & Carvalho, 2016). The fourth concerns context dependence, illustrated by studies whose results are bound up with idiosyncratic conditions—such as the post-mining-boom slowdown in Australian construction—that do not travel well (Mavi & Standing, 2018). The fifth, and arguably most consequential, is the narrowness of focus: by modelling the direct relationship in isolation, most studies leave out the organizational, cultural, and team-level factors—organizational culture, communication climate, stakeholder engagement, leadership—that almost certainly shape it (Blak Bernat et al., 2023; Wu et al., 2023b). This last category is precisely where the recent literature has begun to push, and it frames the agenda set out later (Liaquat et al., 2024; Sarwar et al., 2022).

5. Discussion

5.1 A Robust but Under-Theorized Relationship

The uniformity of the Theme 1 results is genuinely informative. When an association survives across different theoretical lenses, industries, and national economies, it becomes difficult to dismiss as a quirk of method or setting, and the most reasonable reading is that SPM and project success are positively linked as a general matter (Carvalho & Rabechini, 2017; Shaukat et al., 2022). This is good news for practitioners who are considering whether sustainability commitments are a trade-off

for delivery—sustainability can be complementary and not conflicting (Kivilä et al., 2017). The pattern is echoed in recent cross-sectional research which found that projects with stronger sustainability attributes are also more successful projects (Magano et al., 2024).

However, this consistency is what makes the discovery believable, but also reveals the weakness of the field. When a relationship is established without being explained, it is half understood. We still know very little about the mechanisms that transmit the impact of SPM on project outcomes because of the predominance of the direct-effect models. As far as they have investigated, the journey is seldom straightforward: sustainable project planning has been found to moderate the relationship between SPM and success, while sustainable leadership has been found to moderate the relationship between SPM and success (Chow et al., 2021; Liaquat et al., 2024). These results suggest a more complex causal structure, one that has not yet been modelled by much of the literature. The main effect needs to be confirmed 13th time, and the black box linking practice with performance, would add a lot.

5.2 Contextual Boundary Conditions

The contextual map assembled in Section 4 should temper any claim that the relationship is truly universal. The apparent diversity of the corpus is authentic at the country labels, but shallow at the design level. The sectoral picture, the triple bottom line picture, and the convenience or purposive sampling picture within one jurisdiction shape the methodological picture, respectively (Mavi & Standing, 2018; Klaus-Rosińska & Iwko, 2021). When most studies share these features, their agreement is partly a product of their similarity. The honest answer is that the positive correlation between SPM and PS is solid in TBL designs that are focused on construction, and is likely, but not yet proven, to be extendable outside of such designs. The implementation of those boundaries will require deliberate variation in sector, theory and national context, and not further replication of the modal design (Armenia et al., 2019; Sabini et al., 2019).

5.3 Methodological Reflections

The methodological limitations listed in Theme 2 are not coincidental and are what the evidence enables. Cross-sectional and self-reported data can only be used to show association, rather than causal direction, and are susceptible to common-method and social-desirability bias, which would tend to increase any already positive correlation (Carvalho & Rabechini, 2017; Wu et al., 2023a). Estimates also lack precision and transferability due to the small and non-probability nature of the sample (Khalilzadeh et al., 2016). This does not mean that the relationship is spurious; the convergence across studies speaks against that. It does not imply that the field needs longitudinal designs, multiple source designs, probability sampling (where possible) and objective or independent ratings of success (Page et al., 2021), but that these designs would be useful.

5.4 Theoretical Implications

From the theoretical perspective, the review backs the argument that sustainability should be considered and addressed as a separate school in project management and not just a side story (Silvius, 2017). The diversity of the frameworks that deal with the SPM-PS relation (TBL, RBV, stakeholder, and institutional theory) indicates that none of these traditions claim to own the concept, and integration of theoretical approaches might provide the most fruitful theoretical analyses. A resource-based reading, for example, casts sustainable practices as strategic investments that build inimitable capability, while a stakeholder reading explains why sustainability-driven engagement improves the outcomes that broadened success criteria now reward (Shaukat et al., 2022; Wu et al., 2023b). These lenses, when coupled with explicit mediating and moderating constructs would shift the field from cataloguing that SPM matters to theorizing how it matters (Chofreh et al., 2019).

5.5 Practical Implications

The takeaway for project managers and project sponsors is two-fold. First, there is no evidence that adopting a sustainable approach to planning and execution has ever been a liability to success;

on the contrary, it is an asset to success (Martens & Carvalho, 2017; Magano et al., 2024). Secondly, the evidence is consistent across sectors and countries and there is ample evidence that lessons learned in one context can be transferred and adapted to another (Martens & Carvalho, 2017; Magano et al., 2024). For the later synchronization in the goal definition and planning phases, embedding sustainability criteria early on, before a compliance check, seems particularly valuable, as sustainable planning acts as a mediator (Chow et al., 2021; Phung et al., 2023). Secondly, since the relationship is influenced by the organizational and human factors, the leaders should pay attention to the conditions that contribute to the strengthening of the relationship: capable sustainability-oriented leadership, intentional stakeholder engagement, and a positive organizational and communication environment (Wu et al., 2023b; Liaquat et al., 2024). Policymakers, on the other hand, can encourage these behaviors through sustainability requirements, for example, ensuring sustainability expectations are embedded in procurement and contracting requirements (Mavi & Standing, 2018).

6. Conclusions, Limitations, and Future Research

6.1 Conclusions

The aim of this review was to understand how sustainable project management is related to project success and the direction of the field. We found the results to the first research question to be clear: in 12 empirical studies across various theories, industries, and countries, there are no empirical studies that give a negative relationship between SPM and project success. The answer to the second is more sobering. That extreme consistency is based on a limited methodological and contextual foundation, as well as close-effect models which provide little insights into the functioning of the relationship. In fact, the literature has repeatedly shown their point and reiterated it. The contribution of this study is to report the strength of the link, to outline the contextual architecture that qualifies it and to turn

the limitations it faces into a structured agenda for further development in the field.

6.2 Limitations of This Review

Several limitations should be borne in mind. The narrow time-frame for a decade and the requirement for the work to be in English, empirical and peer-reviewed would have filtered out work that is foundational, non-English and grey-literature and could have overstated out-of-mainstream journalistic views. The search engine used was the primary search engine and a pre-specified search string was used, so some potentially eligible studies may have been excluded. Although the total number of twelve studies is adequate for a focused thematic synthesis, the level of studies is small, and the review explicitly discussed the mediators and moderators that a specific meta-analytical or model-focused review might highlight. Such decisions are made for the sake of transparency and focus rather than comprehensiveness, and readers need to consider conclusions in light of this.

6.3 A Future Research Agenda

The limitations identified in Theme 2 are related to the limitations noted. Firstly, future studies should adopt more comprehensive and larger samples to better represent the various project stakeholders, including clients, designers, contractors, and end users (Banihashemi et al., 2017), besides project managers, in order to produce more representative and reliable estimates. Second, on generalizability, the field requires intentional variation that goes beyond construction and mode and spans cross-sectoral and cross-cultural studies testing for the generalizability of the relationship beyond the mode context (Sabini et al., 2019; Klaus-Rosińska & Iwko, 2021). Third, on the method, longitudinal and multi-source designs would permit to test the relationship causally, as opposed to a cross-sectional approach (Carvalho & Rabechini, 2017; Page et al., 2021). Fourth, and most crucially, future research should take the next step beyond the direct effect by modelling mediators and moderators that help to explain the

direct effect such as organizational culture, communication climate, stakeholder engagement, team composition and sustainable leadership (Chow et al., 2021; Wu et al., 2023b; Liaqat et al., 2024). Pursuing these four priorities would shift the literature from confirming that sustainable project management contributes to project success toward explaining how, when, and for whom it does so—the knowledge that scholars and practitioners now most need (Armenia et al., 2019; Chofreh et al., 2019).

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