Expanding the Paradigm of Project Success: A Review of Diversity as a Critical Success Condition in Project Management

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Abstract

This paper explores the evolving conditions for project success by presenting diversity as a critical but previously overlooked factor within established project management frameworks. Revisiting the 2015 Conditions for Project Success report by the Association for Project Management (APM), this research employs a qualitative methodology, drawing on interviews with project management professionals across diverse sectors to analyse the impact of diversity on project outcomes. Findings suggest that diversity, encompassing gender, ethnicity, disciplinary backgrounds, and cognitive perspectives, plays a pivotal role in fostering innovation, resilience, and adaptability within project teams. Leveraging aspects of the Communities of Practice (CoP) model, this study examines how diverse teams employ boundary-spanning roles and practices, integrating varied perspectives that reduce groupthink and enhance complex decision-making processes. The proposed Diversity-Driven Success Framework (DDSF) conceptual model further suggests that diversity drives adaptive capacities through a continuous feedback loop of knowledge exchange, positioning it as an essential success condition alongside established factors like effective governance and team competency. These insights underscore the need for an expanded project management framework that formally recognises diversity as integral to sustained project success. This paper invites further scholarly inquiry and empirical research to bridge the gap between traditional project success criteria and the adaptive requirements of contemporary project environments.

Keywords: Project success, diversity, communities of practice, boundary spanning, project team, project management, critical success factors.

1. Introduction

Contemporary project management faces enduring challenges, with studies indicating that approximately 80% of major projects fall short of meeting their intended objectives (APM, 2015; Flyvbjerg & Budzier, 2013). In response to these systemic issues, the Association for Project Management (APM) established a framework in 2015, outlining twelve critical success factors. This framework, adopted across various sectors, highlights foundational elements such as effective governance, team competency, clarity of objectives, and the security of financial resources. While these factors have shaped practical applications within project management, they were developed prior to the widespread impacts of digital transformation and emerging complexities in project team dynamics (Binder, 2016; Dacre et al., 2019; Kerzner, 2022).

Recent research in organisational behaviour and management studies has identified substantial correlations between team diversity and performance outcomes. Meta-analytic findings indicate that teams demonstrating greater demographic and cognitive diversity are more likely to achieve improved performance in complex decision-making scenarios compared to homogeneous teams (Stahl et al., 2010). As project environments become increasingly complex, characterised by virtual collaboration, cross-cultural interaction, and interdisciplinary challenges, traditional paradigms of team composition and management merit critical re-evaluation (Hsu et al., 2016; Iorio & Taylor, 2014; Maznevski & Chudoba, 2000). Contemporary project teams often span disciplinary boundaries, incorporating diverse perspectives, methodological approaches, and areas of expertise (Anantatmula & Thomas, 2010; Lumseyfai et al., 2019; Zhang et al., 2018). Whilst this diversification can enhance both innovation and problem-solving capacity, it can also simultaneously introduce distinct challenges in coordination and communication that demand sophisticated management strategies (Hoffmann, 2009; Ratcheva, 2009).

The significance of this research is accentuated by the convergence of three fundamental trends. Firstly, the acceleration of global project delivery has led to an increase in the number of project teams operating across multiple contexts (Klimkeit, 2013; Maynard et al., 2012). Secondly, technological innovation has enabled novel forms of collaboration whilst concurrently increasing project complexity (Binder, 2016; Brookes et al., 2020; Majchrzak et al., 2005). Thirdly, there is a growing recognition of the necessity for cross-disciplinary approaches to address complex problems, which has prompted the formation of more heterogeneous team compositions (Ochieng & Price, 2010). Despite these

significant shifts in the project management landscape, diversity and cross-disciplinary interaction remain largely absent as formalised success factors within dominant theoretical frameworks, including the APM model.

This study addresses this gap by examining the extent to which diversity constitutes a previously under-recognised condition for project success in contemporary contexts. Specifically, it investigates how team diversity, including factors such as gender, ethnicity, disciplinary background, and cognitive perspective, may influence project outcomes within modern organisational settings. Furthermore, it explores the mechanisms through which various forms of diversity affect specific project performance metrics, analyses the interaction between diversity effects and established APM success factors, and evaluates management practices that can effectively harness diversity while minimising potential coordination challenges.

From a theoretical perspective, the research it aims to expand the APM framework by integrating insights from diversity research and addressing current challenges in project management (Sonjit et al., 2021c). From a practical standpoint, it aims to offer project leaders empirically grounded guidance for assembling and managing diverse teams in complex environments. Specifically, by examining diversity as a potential critical success factor, this study responds to calls from academics and practitioners for updated project management frameworks that reflect a range of organisational realities and routines (Dacre et al., 2014). The findings will aim to develop the theoretical understanding of project success conditions whilst simultaneously informing practical strategies for team composition and management in an increasingly complex and interconnected project landscape.

2. Literature Review

2.1 Traditional Project Success Models in Contemporary Practice

Frameworks for project success have traditionally sought to establish stable conditions under which projects achieve their objectives (Belout & Gauvreau, 2004; Winch, 2012). However, as project environments grow increasingly complex and interconnected, these frameworks often fail to encapsulate the dynamic and pervasive elements crucial to success in contemporary contexts (Floricel et al., 2014; PMP, 2008; Tinoco et al., 2016). The 2015 Conditions for Project Success report by the APM reflects this traditional approach. Its twelve identified success factors, such as effective governance, team competency, and secure financial resources, are rooted in an understanding of project success that centres primarily on largely static conditions often within controlled environments (APM, 2015).

Whilst these factors provide a valuable foundation, they do not however fully account for external pressures or the adaptive capabilities expected in rapidly evolving project contexts (Flyvbjerg & Budzier, 2013; Kerzner, 2022).

A notable limitation of the APM framework is its omission of diversity as a critical factor in achieving project success (APM, 2015). Although the framework emphasises team competency, it operates under the assumption that project teams are homogenous units. This perspective neglects substantial research showing that diverse teams, spanning differences in gender, culture, cognitive approach, and disciplinary expertise, can better navigate complexity and deliver superior outcomes (Maznevski & Chudoba, 2000; Stahl et al., 2010). Recent studies in organisational behaviour suggest that diversity can mitigate groupthink, foster innovation, and enhance resilience, particularly in environments characterised by uncertainty and rapid change. In contrast, the APM framework's silence on diversity suggests an outdated view of project teams, inadequately reflecting the realities of diverse, interdisciplinary groups required to handle contemporary challenges (Iorio & Taylor, 2014; Ochieng & Price, 2010).

Furthermore, the framework's primary focus on internal project elements arguably underplays the profound impact of digitally driven external complexities on project success (Gledson, 2017; Hsu et al., 2021b; Omar et al., 2017). Research underscores that digital transformation has engendered a paradigm shift in project execution modalities, with virtual collaboration, asynchronous communication, and rapid technological advances becoming endemic (Binder, 2016; Hsu et al., 2021a; Klimkeit, 2013). These developments introduce challenges that go beyond those faced by co-located, culturally similar teams, requiring nuanced strategies for coordination, decision-making, and communication across diverse project settings (Barber et al., 2021). However, the APM framework's limited engagement with these external dynamics restricts its utility for teams operating within digital and cross-cultural contexts, thereby diminishing its efficacy for the modern project landscape (Majchrzak et al., 2005).

Finally, while the APM framework contributes valuable baseline conditions for success, it inadvertently propagates a static conception of project achievement (APM, 2015; Belout & Gauvreau, 2004; Winch, 2012). In privileging secure internal resources, the model arguably overlooks the inherent adaptive qualities vital for addressing unpredictable, interdisciplinary challenges. Research suggests that cognitive diversity, for instance, can significantly enhance complex decision-making and innovation within project teams (Stahl et al., 2010), however this

factor is notably absent from the APM framework's criteria. This omission highlights a broader limitation, in that traditional frameworks, which emphasise predictable resources and internal stability, may fail to adequately address the imperatives of success within digitally and culturally complex projects. In sum, although the APM framework offers a preliminary understanding of project success, its cursory treatment of diversity, external complexities, and adaptability indicates a need for comprehensive expansion.

2.2 Strategic Importance of Diversity in Complex Environments

Extant research within management and organisational behaviour increasingly suggests that diversity may serve as a salient asset, particularly in fostering team performance within complex and dynamic environments (Kockum & Dacre, 2021; Milliken & Martins, 1996; Nkomo et al., 2019; Van Knippenberg et al., 2004). The benefits of diversity are largely pervasive across various dimensions, encompassing demographic diversity, such as gender and cultural background, as well as cognitive diversity, which entails differences in thought processes, expertise, and problem-solving approaches (Cox & Blake, 1991; Dennissen et al., 2020; Page, 2008). This research collectively suggests that diverse teams possess the potential to address complex challenges, positioning diversity not merely as advantageous but as a potentially essential component within contemporary organisational paradigms (Maznevski & Chudoba, 2000; Stahl et al., 2010).

One of the most compelling arguments for diversity's impact lies in its capacity to enhance decision-making quality. Diverse teams, by virtue of their varied perspectives, can interrogate problems with greater nuance, leading to a comprehensive examination of alternatives and reducing the likelihood of homogenous group thinking (Janis, 2020; Jehn et al., 1999; Maznevski & Chudoba, 2000; Schafer & Crichlow, 2010). Stahl et al. (2010), through a meta-analysis of multicultural workgroups, illustrate that teams with members from diverse backgrounds can exhibit heightened levels of creativity and innovation. This propensity likely arises as team members contribute distinct viewpoints that challenge entrenched modes of thought, encouraging the group toward solutions that more homogenous teams may overlook. This potential for generating innovative solutions is particularly relevant in contexts where projects are complex and outcomes remain ambiguous (Amabile, 1996; West, 2002).

Diversity also appears to enhance resilience, a trait increasingly valued in contexts marked by volatility and ambiguity. Research indicates that teams encompassing a breadth of perspectives are more adept at adapting to evolving conditions, as

they are not confined to a single cognitive framework that could otherwise hinder flexibility (Anantatmula & Thomas, 2010; Ely & Thomas, 2001; Fredrickson, 2001). For instance, in a study examining cross-disciplinary teams, Anantatmula and Thomas (2010) suggest that diverse teams may demonstrate a greater capacity for agile responses to unforeseen challenges by leveraging a broader set of knowledge and strategies (Dong, Dacre, et al., 2021b). This adaptability becomes particularly significant in project settings where uncertainty is endemic, as it mitigates potential stagnation and fosters a constructive engagement with emerging issues (Gkogkidis & Dacre, 2020a; Sutcliffe, 2006).

However, the inherent advantages of diversity are not ensured and often remain contingent upon effective management. Research suggests that the same variances that can engender innovation and resilience may also introduce challenges in communication and coordination, as team members often need to reconcile disparate approaches (Maznevski & Chudoba, 2000; O'Reilly III et al., 1989). For example, cognitive diversity can introduce divergent problem-solving methodologies, which may engender conflict (Jehn, 1995). Thus, studies underscore the importance of frameworks that support inclusive collaboration, such as establishing shared goals and fostering open dialogue, in order to enact the potential of diverse teams (Edmondson, 1999; Iorio & Taylor, 2014; Williams & O'Reilly III, 1998). Without these supportive measures, diversity may inadvertently foster fragmentation rather than cohesion.

2.3 Limitations of a Stability-Oriented Approach in Adaptive Contexts

As noted, the APM's 2015 Conditions for Project Success framework introduced twelve factors to stabilise project environments, however its conventional control-oriented approach may limit applicability in complex, adaptive contexts (APM, 2015; Dong, Dacre, et al., 2021a; Flyvbjerg & Budzier, 2013; Sutcliffe, 2006), and by prioritising stability over responsiveness, the framework suggests a theoretical gap that may hold practical implications, as it overlooks the potential contributions of diversity and adaptability (Edmondson & Harvey, 2018; Maznevski & Chudoba, 2000). For instance, one critical shortfall of the APM model is its reliance on team competency as a static measure of skill, focusing solely on technical expertise while neglecting the essential role of cognitive diversity. The framework's treatment of governance also highlights its limitations. Whilst it stresses the importance of clarity in leadership roles and communication channels as success determinants, it fails to account for the complexities inherent in cross-functional and globally distributed teams, where governance must also facilitate

boundary-spanning and integrative roles (Iorio & Taylor, 2014; Marrone, 2010; Maznevski & Chudoba, 2000).

Secure funding and aligned supply chains within the APM framework also reflect a rigid, stability-driven model, assuming predictable resource allocation and uniform stakeholder interests. This assumption, however, may be increasingly tenuous, as project funding and supply chains often need to adapt to shifting demands in globalised markets and digital contexts (Floricel et al., 2014). Without the adaptive resource management strategies afforded by diverse teams (Gkogkidis & Dacre, 2021), project managers relying on a rigid funding structure may find themselves unprepared for sudden resource shortfalls or market shifts, situations in which diverse strategic approaches may help mitigate risk (Gledson, 2017). The exclusion of adaptive funding practices in the APM model not only restricts the agility of project responses (Dong, Bailey, et al., 2021) but also suggests a disconnect with the resource flexibility crucial to resilient project management in contemporary settings (Sonjit et al., 2021a).

Moreover, the APM framework's emphasis on clearly defined objectives presupposes static project goals, with limited capacity to accommodate the iterative targets that can characterise innovation-driven and digital projects. This fixed-objective paradigm may underestimate the complexities of dynamic project environments (Ely & Thomas, 2001). In this vein, an expanded framework that positions diversity as a strategic asset has the potential to bridge the gap between static models and the dynamic realities inherent in modern project management (Sonjit et al., 2021b).

3. Communities of Practice

The Communities of Practice (CoP) model, conceptualised by Lave and Wenger (1991) and subsequently refined in academic discourse (Li et al., 2009; Smith et al., 2017; Wenger, 2009), offers a valuable theoretical lens to review how knowledge-sharing dynamics within project teams may be shaped by diversity. In contexts marked by cross-disciplinary and multicultural diversity, CoP suggests that diverse project teams are not merely technical assemblies but complex social structures capable of evolving through shared practices (Edmondson, 1999; Wenger et al., 2002). In the context of project management, the CoP framework underscores that diverse project teams may constitute more than an assembly of technical skills, suggesting instead that they are social entities capable of learning and evolving through shared practices (Gkogkidis & Dacre, 2020b). In diverse teams, varied perspectives and experiences may foster adaptability and

innovation, integrating disparate knowledge and enhancing problem-solving capacities (Harvey & Kou, 2013; Maznevski & Chudoba, 2000). This adaptability, engendered by a collective commitment to project objectives, can be critical in dynamic project environments where conventional approaches to knowledge transfer and decision-making may be insufficient (Page, 2008).

3.1 Boundary Spanning and Groupthink Prevention

Boundary spanning which is a central component of the CoP model, refers to the process by which individuals operate across disciplinary, functional, or cultural boundaries to integrate diverse perspectives and expertise (Marrone, 2010). This boundary-spanning role has been identified as critical in managing complex project environments, where teams often include members from multiple professional and cultural backgrounds (Hoffmann, 2009; Iorio & Taylor, 2014). Diverse project teams may benefit from boundary-spanning roles as these individuals work to bridge knowledge gaps, facilitate communication, and promote inclusivity, thereby potentially reducing risks associated with groupthink, a phenomenon where homogenous perspectives stifle critical analysis and innovation (Janis, 2020).

Boundary-spanning practices have been shown to be instrumental in global virtual teams, where members are required to navigate geographical and cultural divides. In project management contexts, this capacity for navigating boundaries is particularly valuable, as it helps create integrative links across disparate areas of expertise and encourages a holistic approach to problem-solving (Maznevski & Chudoba, 2000). Research underscores that effective boundary-spanning activities within diverse teams can lead to rigorous questioning and constructive debate, which may enhance both innovation and critical thinking (Edmondson & Harvey, 2018). Such practices align with the CoP model's emphasis on fostering open dialogue and mutual understanding, suggesting that boundary-spanning roles within project teams can contribute to effective knowledge-sharing practices and enhance adaptive responses to dynamic project needs (Iorio & Taylor, 2014; Stahl et al., 2010).

3.2 Application of Theory to Project Management

Within the CoP framework, diverse teams are understood not simply as collections of individuals with varied backgrounds but as cohesive, collaborative entities capable of leveraging their differences to optimise project performance (Fredrickson, 2001; Sutcliffe, 2006). Research suggests that cognitively and culturally diverse teams exhibit greater resilience and innovation in complex

environments, with members drawing on both shared and distinct knowledge bases to respond dynamically to evolving project requirements (Stahl et al., 2010).

This theoretical model proposes that project teams may benefit significantly from viewing diversity as a formalised success factor. As such, by positioning project teams as communities of practice, project managers are afforded a strategy to foster inclusivity, promote boundary-spanning roles, and support continuous learning across team members. This approach aligns with findings from recent studies, which highlight that effective integration of diverse perspectives can bolster innovation and adaptability within complex project environments (Ratcheva, 2009). As such, by adopting the CoP framework, this study aims to review how diversity may contribute to sustainable project success, thereby offering an expanded understanding of project conditions attuned to the complexities of modern, adaptive project contexts.

4. Methodology

We adopt a qualitative research design to review the influence of diversity within project management, with semi-structured interviews serving as the principal data collection modality. In this vein, it contrasts with the quantitative survey methodology employed in the APM 2015 Conditions for Project Success report, which sought to establish broad correlations across a wide sample of project conditions and outcomes (APM, 2015). Whilst the 2015 report effectively underscored salient factors linked to project stability, its structured survey was not imbued with the capacity to capture the depth and context-specific nuances inherent to qualitative inquiry, especially regarding diversity's dynamic and adaptive implications, which are often better captured through qualitative approaches focusing on interpretive, contextual understanding (Denzin & Lincoln, 2011; Merriam & Tisdell, 2015).

Thus, by selecting a qualitative framework, we seek to contextualise diversity's role as an evolving factor, rather than a fixed determinant in project success. Semi-structured interviews afford a richer, more descriptive discourse, exposing how professionals perceive and experience diversity's latent and pervasive influence within manifold project settings. This approach aligns with our study's objective to transcend static success indicators, focusing on diversity as an adaptable element that engenders resilience, adaptability, and team cohesion in intricate settings (Creswell, 2013; Patton, 2014). This aligns with our objective to investigate diversity as an adaptable component within project success, supporting themes like boundary spanning, which enable teams to bridge knowledge gaps and

integrate multiple perspectives, often critical in interdisciplinary and multicultural teams (Iorio & Taylor, 2014; Marrone, 2010).

4.1 Participant Selection and Sampling

Participants for this study are selected through purposive sampling to ensure a variety of perspectives on diversity's impact across different sectors. In contrast to the APM 2015 report's survey-based sampling strategy, we aim to engage with a focused group of project management professionals who have direct experience managing or participating in diverse project teams (APM, 2015). This sampling strategy is intended to capture the complexity of diversity in specific contexts, which may not have been fully reflected in the broad, survey-based methodology of the 2015 report (APM, 2015; Yin, 2015).

In concentrating on experienced professionals within diverse project environments, we aim to delineate industry-specific or situational insights that illustrate diversity's variable impact on project success factors across distinct sectors (Reynolds & Dacre, 2019). Moreover, snowball sampling will supplement this strategy, allowing for the inclusion of additional participants recommended by initial interviewees, a method often effective in studies targeting participants with specific expertise or roles (Biernacki & Waldorf, 1981). Participants with boundary-spanning roles, such as those who facilitate knowledge-sharing and coordination across team boundaries, will be prioritised, as these roles are central to understanding how diverse perspectives are integrated within teams, in line with the CoP model (Marrone, 2010; Wenger, 1999). We thus argue that this method fosters a more comprehensive grouping of perspectives, which will enhance both the depth and breadth of the discourse surrounding diversity's role in project success.

4.2 Data Collection and Analysis

In order to operationalise the CoP framework's concept of boundary spanning, interview questions will explore how participants navigate cross-functional and cross-cultural boundaries, examining practices that enable diverse team members to share insights, avoid groupthink, and enhance problem-solving (Edmondson, 1999; Wenger et al., 2002). This targeted questioning enables us to identify specific ways that diversity influences project success factors, particularly in settings where boundaries between disciplines, roles, or cultures are integral to project outcomes (Salk & Brannen, 2000).

Interview transcripts will undergo thematic coding to identify recurrent themes related to diversity's influence on project outcomes. In order to ensure systematic data organisation, we will employ NVivo to facilitate a structured comparison of qualitative responses, a tool widely recognised for its utility in qualitative research by enabling the tracking and categorisation of large volumes of textual data (Jackson & Bazeley, 2019). Thematic analysis will unfold through open coding to identify emergent themes, followed by axial coding to uncover connections among themes and establish hierarchical patterns within the data, a method advocated for exploring multifaceted social phenomena (Braun & Clarke, 2006; Strauss & Corbin, 1998). This approach allows us to explore complex, nuanced themes that may not emerge through purely quantitative methods, thereby complementing the more static findings of the 2015 APM report. In synthesising early insights from the data, we plan to share preliminary findings with key stakeholders for validation and iterative feedback as part of the broader APM-commissioned research initiative (Maxwell, 2012).

5. Qualitative Insights

5.1 Diversity as a Potential Success Factor

Preliminary discussions with project management professionals suggest that diversity may serve as a complex and potentially influential factor in project success. Although diversity was not originally incorporated into the APM's 2015 Conditions for Project Success framework, our findings indicate that it has the potential to enhance team innovation, resilience, and adaptability. For instance, our interviewees consistently reported that teams can benefit substantially from diversity in gender, ethnicity, and disciplinary perspectives. Such diverse perspectives largely enrich idea generation and can foster more effective problem-solving approaches by incorporating a broader array of viewpoints. This suggests that diverse teams may be more inclined to foster innovation, as members bring unique insights and challenge established thinking. Consequently, whilst formal frameworks do not yet fully recognise diversity as a condition for success, our initial findings largely underscore its support as a factor worth further exploration.

5.2 Boundary-Spanning Practices in Diverse Teams

Preliminary data also suggests that boundary-spanning roles may be integral in supporting diverse project teams. Specifically, in that the CoP framework's concept of boundary spanning, whereby team members bridge distinct knowledge domains, can play a key role in managing interdisciplinary or multicultural projects. Participants identified these roles as crucial for integrating

ideas across cultural, disciplinary, and functional divides. For instance, interviewees highlighted that "boundary spanners" largely enable more effective knowledge-sharing and problem-solving by navigating the complexities inherent in varied expertise. This reinforces the argument that boundary-spanning practices are pivotal in diverse teams, where knowledge exchange across boundaries may prevent isolated thinking and increase overall adaptability. Thus, positioned at the periphery of teams, boundary spanners have the potential to contribute by introducing novel perspectives and translating insights between members, creating a collaborative environment that is both inclusive and dynamic.

5.3 Diversity and Team Ethos

A third theme emerging from early interviews is the link between diversity and team ethos. Participants suggested that diversity largely enhances the team's collective ethos, fostering a culture of mutual respect and openness to differing viewpoints. For example, we observed that disciplinary and cognitive diversity appear to promote a balanced team dynamic where varied skills and perspectives are valued (Dacre, Eggleton, et al., 2021; Tite et al., 2021b). This dynamic may contribute to the quality of project outcomes and may also foster a positive team ethos conducive to sustained success. This suggests that diversity's impact extends beyond cognitive contributions to shape the social fabric of the team, and these early insights suggest that it may play an integral role in building cohesive and resilient project teams.

6. Discussion

6.1 Relevance of Diversity as a Success Condition

Whilst the APM's 2015 framework provides a foundation for stability, it implicitly assumes that project teams are homogenous entities operating within relatively static environments (APM, 2015; Winch, 2012). This assumption can be problematic, as it largely overlooks the capacity of diverse teams to engage with complexity and change (Tite et al., 2021a), precisely because they draw upon varied perspectives and problem-solving approaches (Edmondson & Harvey, 2018; Maznevski & Chudoba, 2000). For instance, insights from our study indicate that diversity in gender, ethnicity, and disciplinary backgrounds has the potential to contribute to innovative thinking by challenging entrenched assumptions. This aligns with broader research suggesting that cognitively diverse teams are often better equipped to mitigate groupthink, thereby reducing risks and promoting sustainable success (Janis, 2020; Page, 2008; Stahl et al., 2010). Thus, the APM framework's omission of diversity suggests a limited and potentially outdated

conceptualisation of success factors, one that may inadequately address the demands of volatile, interdisciplinary project environments (Flyvbjerg & Budzier, 2013; Kerzner, 2022).

Boundary-spanning roles, in particular, illustrate the critical role of diversity in enhancing team functionality. Members who can bridge knowledge domains, cultural perspectives, and functional areas actively work to prevent the homogeneity of thought that may limit conventional teams (Ochieng & Price, 2010; Wenger et al., 2002). These boundary spanners foster a continuous exchange of knowledge, drawing insights from peripheral perspectives and integrating them into central decision-making processes (Iorio & Taylor, 2014; Marrone, 2010). This function aligns with Janis (2020) observations on groupthink, suggesting that boundary spanners create conditions necessary to avoid insular thinking by ensuring that diverse perspectives remain accessible and valued within team discussions. Without such roles, diverse teams may struggle to realise the full benefits of their varied viewpoints, resulting in potential fragmentation rather than cohesion (Sutcliffe, 2006).

Furthermore, the CoP model underscores that diverse project teams may possess an inherent capacity for collective learning and adaptation, which are qualities increasingly essential in projects characterised by high levels of complexity and ambiguity (Edmondson, 1999; Wenger et al., 2002). Diverse teams, by fostering an inclusive environment where varied viewpoints are respected and integrated, can create a collaborative ethos that supports ongoing learning (Jehn et al., 1999). This contrasts markedly with traditional project frameworks, which implicitly discourage iterative learning in favour of control and predictability (Floricel et al., 2014). Thus, by fostering conditions that enable continuous knowledge exchange, diverse CoPs can engage in collective problem-solving that is both innovative and resilient, positioning diversity as an adaptive mechanism rather than a mere characteristic of team composition (Amabile, 1996; Schafer & Crichlow, 2010).

6.2 Broader Implications

Our findings suggest that team selection emerges as a critical component. Rather than building teams based solely on technical skills, project managers may benefit from considering cognitive and disciplinary diversity as essential criteria (Cox & Blake, 1991; O'Reilly III et al., 1989). For instance, by fostering varied viewpoints and problem-solving styles, teams can be better positioned to meet the adaptive challenges characteristic of complex projects (Dennissen et al., 2020; Ely & Thomas, 2001). Traditional selection practices often neglect this consideration,

overlooking empirical evidence suggesting that diversity, particularly in cognitive approach and disciplinary expertise, can enhance team performance and adaptability within complex environments (Sutcliffe, 2006; Van Knippenberg et al., 2004). This selective approach to diversity allows teams to leverage a broader repertoire of strategies, thereby increasing resilience and the potential for innovation (Milliken & Martins, 1996).

Findings also suggest that in diverse teams, traditional governance models, which emphasise clear roles and hierarchical decision-making, may limit, rather than enhance, team cohesion. Effective governance in diverse contexts often requires a shift towards more flexible, boundary-spanning roles that facilitate cross-functional collaboration and encourage inclusive decision-making (Iorio & Taylor, 2014; Marrone, 2010; Maznevski & Chudoba, 2000). Such governance strategies are particularly important within interdisciplinary or global teams, where conventional hierarchies can stifle input from marginalised perspectives (Edmondson & Harvey, 2018). Emphasising boundary-spanning roles within governance not only has the potential to harness the full range of diverse perspectives but also mitigates the risk of siloed thinking, which can be damaging to project outcomes (Amabile, 1996; Fredrickson, 2001).

Extant frameworks also typically centre on fixed milestones and predetermined outcomes, which assume a stable project trajectory (Kerzner, 2022). However, diverse teams often require planning processes that are flexible and iterative, accommodating the unique insights that may emerge as projects evolve (Floricel et al., 2014). This reframing of project planning from a linear process to an adaptive cycle allows teams to refine objectives as new insights arise, thus fostering both responsiveness and innovation (Sutcliffe, 2006). In this way, project planning can become a dynamic process that benefits from the iterative and often non-linear contributions of diverse team members, enhancing the adaptability and responsiveness essential in contemporary project environments (Gledson, 2017; Majchrzak et al., 2005).

6.3 Diversity as a Critical Success Condition in Project Management

The following conceptual model synthesises the study's preliminary insights and relevant theoretical frameworks, proposing diversity as a critical success condition in project management. Building on the CoP model (Wenger, 1999) and existing literature on cognitive diversity (Page, 2008) and boundary-spanning roles (Marrone, 2010; Ratcheva, 2009), this Diversity-Driven Success Framework (DDSF) conceptual framework highlights how various dimensions of diversity,

such as disciplinary and functional backgrounds, as well as cognitive perspectives, serve as critical components of innovation, adaptability, and continuous knowledge exchange within project teams (Figure 1).
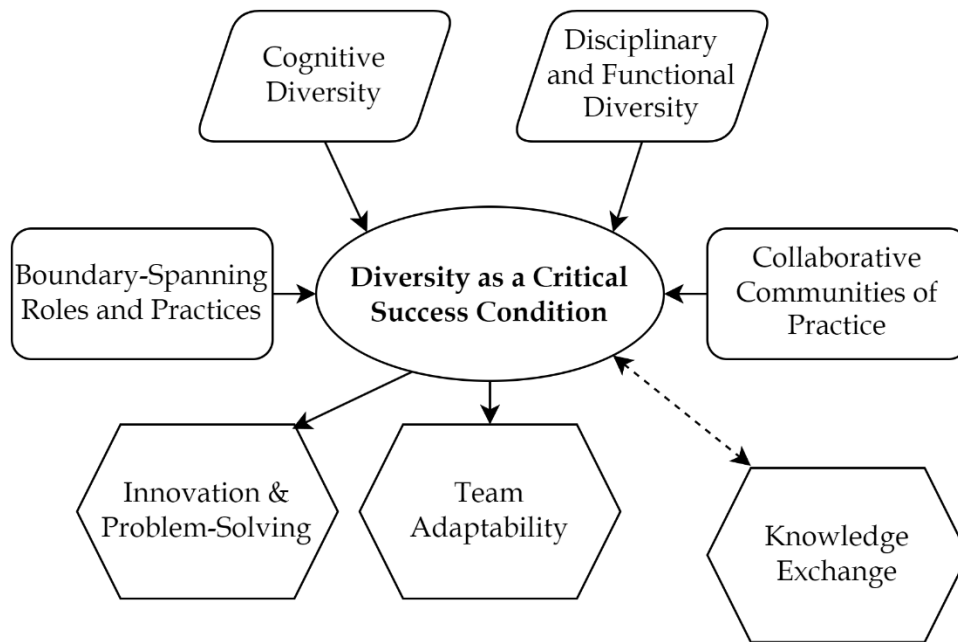

Figure 1: Diversity-Driven Success Framework (DDSF)

In the context of this DDSF conceptual framework, Diversity is delineated as a Critical Success Condition, underscoring the premise that a diverse team composition inherently contributes to project success, particularly within complex environments (Barczak et al., 2006; Hoffmann, 2009). The framework delineates critical dimensions of diversity, notably Cognitive Diversity and Disciplinary and Functional Diversity, each of which engenders unique perspectives and expertise vital for problem-solving and resilient project outcomes (Beise, 2004). In this vein, Boundary-Spanning Roles and Collaborative Communities of Practice emerge as pivotal mechanisms that facilitate the blending of diverse viewpoints. Boundary-spanning roles, for instance, serve to bridge the latent lacunae within team knowledge structures, fostering inclusivity and promoting cross-functional communication (Barczak et al., 2006; Edmondson & Harvey, 2018). Conversely, the CoP framework imbues the team with a collaborative modality that enables synchronous and asynchronous engagement in shared learning, thereby reinforcing team cohesion and enhancing adaptive capacity in response to evolving project demands (Dacre et al., 2018; Zhang et al., 2018).

The DDSF framework further posits three salient outcomes of diversity, being Innovation and Problem-Solving, Team Adaptability, and Knowledge Exchange

(Cox & Blake, 1991; Hsu et al., 2016; Nkomo et al., 2019). Diverse teams, imbued with a series of cognitive approaches, are inherently positioned to innovate, challenging extant norms, and contributing a spectrum of adaptive problem-solving methodologies (Jehn et al., 1999; Liu & Cross, 2016). Team Adaptability typifies the group's capacity to navigate transient project dynamics, drawing on a complex interplay of disciplinary insights to pivot as conditions necessitate.

The Knowledge Exchange outcome is specifically depicted as a recursive feedback loop, underscoring the mutual relationship between diversity and knowledge flow (Edmondson & Harvey, 2018; Liu & Cross, 2016). As such, the continuous interchange of knowledge not only engenders immediate project gains but also reinforces the team's collective adaptability and collaborative ethos over time. This dynamic interaction suggests that knowledge exchange constitutes both an outcome of diversity and a reinforcing factor that amplifies diversity's impact on project success.

7. Conclusion and Recommendations

This study enriches the extant discourse on project success by positioning diversity as an inherent and pivotal factor within project management frameworks. Previously, the APM's 2015 Conditions for Project Success report underscored stability and control, however, this research proposes an adaptive paradigm in which diversity emerges as a core enabler of project success. The conceptual model advanced here, informed by preliminary findings and the CoP framework, delineates how cognitive diversity, interdisciplinary expertise, and boundary-spanning practices foster an environment for innovation, adaptability, and knowledge exchange within project teams. As such, by conceptualising diversity as an adaptive and integrative element, we challenge stability-focused paradigms, instead suggesting a DDSF framework in which diversity becomes indispensable to navigating the complexities and transient demands of interdisciplinary environments (Dacre, Kockum, et al., 2021). From a practical perspective, we suggest that project leaders should strategically incorporate diversity into team selection, governance, and planning, as doing so will engender resilient, knowledge-rich teams. Our model's emphasis on boundary-spanning roles and collaborative practices illustrates how diversity catalyses inclusive decision-making, enhancing the team's capacity for rapid adaptation. The embedded feedback loop further supports the dynamic evolution of collective expertise, fostering an environment wherein the strengths of a diverse team coalesce to continuously enhance adaptability and innovation.

7.1 Limitations of the Study

Despite our contributions, our initial findings are subject to certain limitations. The qualitative methodology, while rich in insights into diversity's impact, lacks the generalisability required for broad extrapolation. Additionally, the sample, comprising primarily project professionals, introduces a latent bias, which may favour diversity's role in project success. Future research phases should consider expanding the participant base to incorporate a more heterogeneous industry representation in order to substantiate the proposed model. Moreover, whilst the CoP framework serves as a valuable theoretical lens, it does not encompass all aspects of diversity's impact on project success. Integrating other theoretical perspectives could address this omission and provide a more granular understanding of diversity's influence on team dynamics and project efficacy, especially in complex or large-scale projects where diversity's role may be more intricate.

7.2 Future Research Opportunities

Given the preliminary nature of this study, there are several promising avenues for future research. First, quantitative studies that measure the direct impact of diversity on specific project outcomes, such as timelines, budget adherence, and stakeholder satisfaction, would provide empirical grounding to complement this study's qualitative insights. Additionally, longitudinal studies examining how diversity impacts project success over time could deepen understanding of its role in fostering sustained team adaptability and resilience. Future research could also explore the interaction between diversity and other established success factors, such as governance and team competency, to identify synergies or tensions within diverse project environments. Investigating how diversity shapes, and is shaped by, different industry contexts could further inform sector-specific adaptations of project success frameworks. Lastly, expanding the theoretical framework to include perspectives from interdisciplinary fields, such as organisational psychology or cultural studies, could enrich the understanding of diversity's impact on project success.

The findings and conceptual model presented in our research present a foundation for further empirical exploration and provide practical insights for integrating diversity into project management practice. As the study progresses, future research can empirically validate and refine this model, potentially guiding a significant shift in both academic and industry perspectives on project success. In redefining success conditions to include diversity, this study aims to bridge

theoretical gaps and offer a comprehensive framework that better aligns with the demands of contemporary project management.

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