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Business Process Management as an enable for behavioral resources: A Predictive Model for Overcoming Project Management to Outcomes

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ABSTRACT

Background: This research studies the impact of behavioral enablers, Top Management Support (TMS) and User Involvement (UI), on Business Process Success (BPS) in mega construction projects (MCPs) in Pakistan. While previous study has highlighted structural and technical factors, limited consideration has been given to behavioral capabilities that form process effectiveness in complex project situations. Grounded in the Resource-Based View (RBV), finally enhancing project consequences.
Method: A deductive, quantitative study design was adopted. Validated constructs from previous literature were adapted and tested with a structured survey administered to engineers, project managers, and stakeholders from 117 Pakistan Engineering Council (PEC)-registered construction firms. PLS-SEM was hired to test direct relationships between IVs and BPS.
Results: Outcomes specify that both TMS and UI have significant and positive impacts on BPS, emphasizing their role as behavioral pillars for attaining stakeholder alignment, process efficiency, and governance quality. Firming process responsiveness under uncertainty and increasing executional success in MCPs.
Conclusion: This research introduces a behavioral microfoundation for BPS within BPM literature, covering RBV to soft business resources in public infrastructure projects. It reconceptualizes project success as process-centered rather than purely outcome-focused. The research is limited to Pakistan's MCPs and does not include private mega projects that may further explain behavioral-process associations. Future research explores longitudinal designs, and additional behavioral dimensions.

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Outcomes proposal actionable insights for policymakers and project leaders to institutionalize executive sponsorship and participatory governance mechanisms to reinforce internal process performance. Improving behavioral governance in MCPs reduces systemic inefficiencies, improves transparency, and maintenances sustainable socio-economic development in developing economies.

Key words: Business Process Success, Top Management Support, User Involvement, Behavioral Enablers, Resource-Based View, Mega Construction Projects, Project Governance, Stakeholder Alignment, Process Efficiency, Business Process Management

Introduction

Business processes found the operational backbone of contemporary organizations, directly impacting strategic adaptability, efficiency, and long-term competitiveness (Trkman, 2010; vom Brocke & Mendling, 2018). Operational management of these processes is vital not only for attaining project-level consequences but also for sustaining organizational performance in complex environments and dynamic. In contemporary business environments, especially in infrastructure-intensive businesses, business process success (BPS) has developed as a more precise indicator of performance than conventional project success (PS) measures, as it assesses how effectively internal processes, like planning, coordination, monitoring, and stakeholder communication, are performed to deliver value (Idogawa, et al., 2023; Seddon, et al., 2010; De Bruin & Rosemann, 2007).

Global study on project management (PM) and BPM has long underlined the importance of critical success factors (CSFs), like stakeholder involvement and leadership commitment, in shaping consequences (Fortune & White, 2006; Pinto & Slevin, 1987). Though, much of the research endures to conceptualize success through high-level results like cost, time, and scope compliance, frequently ignoring the behavioral micro-foundations that drive process-level execution. Additional, BPS is characterized by adaptability, reliability, and stakeholder responsiveness, rather than mere compliance with traditional iron triangle (Kaas, et al., 2025; Atkinson, 1999). So, given these circumstances, behavioral resources like TMS and UI are not just wanted, they are indispensable.

While habitually cited, TMS and UI are frequently treated as checklist items rather than as implanted capabilities proficient of generating strategic benefit. This research reframes them via the lens of the resource-based view (RBV) of the firm (Barney, 1991), which suggests that sustainable competitive advantage rises from the distribution of resources that are valuable, rare, inimitable, and non-substitutable (VRIN). Within this framework, TMS is understood as a resource that mobilizes organizational direction and authority, while UI helps as a real-time feedback tool, determining project outputs to meet growing user needs. These behavioral competences are not only related but are also exclusively positioned to bridge internal project processes with external stakeholder demands (Cronemyr, et al., 2024). Therefore, there is the greater intersection of input/output, then greater chances of BPS.

This action/reaction-role viewpoint aligns with process management theory for intangible resources, where the internal environment must continuously adjust to the

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external one (Zhang, et al., 2023). Framed via an input-process-output (IPO) lens, TMS and UI reside in complementary roles through the project value chain. As an input, TMS injects governance structures, strategic intent, and resource alignment into the project system, thereby determining the settings under which processes unfold (Young & Poon, 2013). Thus, the greater the dealings between TMS and UI, the greater the likelihood of a successful business process.

Within the process stage, these leadership inputs enable shorten escalation times and smoother decision flows, while UI gives as a process and early warning system for sensing condition misalignments. On the output side, UI functions as a sensing mechanism and real-time validation, noticing condition misalignments before they form into costly rework and confirming deliverables meet stakeholder expectations (Bano & Zowghi, 2015; ME de Waal & Batenburg, 2014). When synergized, they improve the organization's capacity to develop strategically fluid, molding internal operations in reply to external cues. Such synergy imitates a higher-order active capability, although grounded in behavioral inputs, allowing organizations to proactively handle complexity in project delivery (Davis, 2014; Bernardo, et al., 2017). Hence, BPS depends on the setting of the organization. In other words, an organization must keep the tractability to adapt to any setting, much like a fluid compelling the shape of its container. So, the greater the fluidity, the higher the probability of successful BPS implementation (Huy & Phuc, 2025).

Therefore, this gap limits the explanatory power of prevailing models, especially in high-risk, unclear settings where governance failures habitually stem from behavioral misalignments rather than technical incompetencies (Zwikael, 2008; Ul Musawir, et al., 2017).

Despite years of study on project governance and process reengineering, behavioral enablers of process success persist under-examined in empirical BPM scholarship (Petter, et al., 2013; Jimmy, et al., 2025; Davis, 2014; Talib,et al., 2024; Schniederjans & Yadav, 2013). Structural and technical factors, while vital, cannot fully account for process variability, particularly in emerging economies where political uncertainty, institutional fragmentation, and limited formal controls amplify reliance on stakeholder collaboration and leadership engagement (Odai,et al., 2025; Syed,et al., 2018). More, the conceptualization of business processes as strategic results remains a critical yet underexplored dimension within project management (PM) literature, especially in deadline-sensitive, capital-intensive, and stakeholder-dependent sectors like construction (Turner & Zolin, 2012; PMI, 2021). Despite significant advances in project methodologies and technology, performance shortfalls continue in many construction projects. These failures are progressively recognized not to technical deficiencies, but to intangible behavioral and organizational dynamics that destabilize process alignment and execution (Flyvbjerg, 2011; Ika, 2009).

More, though the works on Business Process Reengineering (BPR) and enterprise systems implementation is well established, behavioral dimensions of process success (PS) persist under-theorized and under-empirically tested (Trkman, 2010; Sidorova & Isik, 2010). Precisely, the roles of TMS and UI are progressively acknowledged as critical behavioral antecedents of process performance (DeLone & McLean, 2003; Benraad, et al., 2022; Ahlemann, et al., 2009). Although process models and automation implements remain foundational, their success frequently pivots on how well leadership

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and users engage with, adapt to, and support process modification (Markus & Tanis, 2000; Parolia, et al., 2011). Moreover, there is an important research gap in developing economies like Pakistan, where complex infrastructure projects operate under constraints that increase the status of behavioral governance in attaining BPS (Khan, et al., 2021; Iqbal, et al., 2025).

Hence, in contexts such as Pakistan's mega construction sector, projects frequently suffer from stakeholder conflicts, process instability, and decision-making delays, despite adequate resources and engineering capabilities (Khattak & Mustafa, 2019). The lack of systematic behavioral governance mechanisms, especially in the form of TMS and UI (Bano & Zowghi, 2015; Davis, 2014), challenges process adaptability and execution quality (Son, et al., 2025). Prior researches offer little understanding into how these behavioral resources interrelate to shape BPS, leaving both scholars and practitioners without empirically validated direction for refining process performance.

Research Objectives and Questions

This research aims to fill this gap by developing and empirically testing a behavioral framework for BPS and examining how two key behavioral enablers (TMS and UI) effort process-level performance. Grounded in the RBV, the study highlights that behavioral capabilities are intangible, socially complex resources that can generate sustainable competitive advantage when effectively leveraged (Wade & Hulland, 2004; Barney, 1991).

RO1: To examine the direct effect of Top Management Support on Business Process Success.

RO2: To investigate the influence of User Involvement on Business Process Success.

RO3: To empirically validate a process-centric, behaviorally grounded model of BPS using PLS-SEM.

Accordingly, the study is guided by the following research questions:

RQ1: To what extent does Top Management Support affect Business Process Success?

RQ2: How does User Involvement influence Business Process Success?

Contribution of the Study

This study adds to both theory and practice in several ways:

Theoretical Contribution: It progresses BPM literature by introducing behavioral micro-foundations of PS, extending the RBV framework to demonstrate how intangible resources like stakeholder participation and leadership commitment improve process capabilities (Seddon, et al., 2010; Barney, 1991). Unlike traditional success models that highlight end-state consequences, this research positions BPS as a capability conversion tool through which behavioral enablers make sustainable performance advantages.

Practical Contribution: The results deliver evidence-based recommendations for policymakers and project managers on institutionalizing behavioral governance mechanisms to improve stakeholder alignment, process agility, and execution quality. This is especially critical for public-sector mega projects in emerging economies where formal governance systems are fragile and failure rates persist high (Ali, et al., 2025; Khan, et al., 2025).

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Literature Review

Business Process Success

BPS is gradually known as a critical basis of organizational effectiveness, bridging the gap between strategic resolved and operational execution (Trkman, 2010; vom Brocke & Mendling, 2018; Szelągowski & Sliż, 2024). Conventionally, PS has been measured using the "iron triangle" of cost, time, and scope (Pinto & Slevin, 1987; Turner & Zolin, 2012). But, this outcome-centric view frequently overlooks the internal mechanisms that drive successful delivery, especially in complex and dynamic project settings (Szelągowski et al., 2024; Fortune & White, 2006; Atkinson, 1999).

BPS concentrates on the quality of process execution, including stakeholder alignment, efficiency, process adaptability, and continuous development (de Bruin & Rosemann, 2007; Seddon, et al., 2010). This process-centric method highlights how well activities such as planning, coordination, monitoring, and communication are achieved to confirm effective project delivery. Current BPM scholarship emphasizes on BPS as a capability-based view, where well-governed processes doing as vehicles for sustainable benefit (Rosemann & vom Brocke, 2014).This change highlights the requirement to study behavioral factors that form execution quality, as technical abilities alone cannot guarantee process success (Pereira, et al., 2019; Hrabal, et al., 2021).

Among many critical success factors, TMS and UI assist as systemic enablers that bridge the technical and behavioral facets of projects. Their predictive power is revealed in the structural model's R^2 value, where these two constructs give disproportionately to the explained variance in PS. This aligns with previous findings (e.g., Petter et al., 2013; Musawir et al., 2017) and highlights their strategic significance in both managing and gauging project performance. Therefore, the research bridges theory and practice in methods formerly unexplored in large-scale construction projects within emerging economies. Despite their known importance, empirical study has frequently treated TMS and UI as enablers of overall PS, leaving their direct impact on process-level outcomes (like BPS) largely unexamined (Seddon et al., 2010).

The context of Pakistan's Construction Projects (MCPs)

The construction sector in Pakistan acts a pivotal role in national economic growth, paying meaningfully to GDP and employment (Nasir, 2024). MCPs (including energy, large-scale transportation, and urban growth initiatives) are strategically significant but notoriously prone to underperformance (Li, et al., 2021). Extraordinary failure rates are linked to inadequate stakeholder coordination, fragmented governance structures, and political interference, rather than technical ineffectiveness (Vidal & Marle, 2008; Qazi, et al., 2016). In this volatile organizational setting, project governance often lacks steady leadership commitment and regular stakeholder engagement (Khan, et al., 2021). As a consequence, MCPs in Pakistan experience cost overruns, delays, and low stakeholder satisfaction, highlighting the requirement to inspect behavioral enablers of process success beyond conventional structural and technical factors.

Top Management Support (TMS)

TMS is a long-standing CSF in PM, often cited as one of the strongest predictors of successful project implementation (Zwikael, 2008; Young & Poon, 2013). TMS provides allocates resources, legitimacy, resolves conflicts, and creates a governance

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framework that confirms alignment with organizational strategy (Turner J. R. & Müller, R., 2005; Ul Musawir, et al., 2017). In MCPs, where uncertainty and complexity are high, executive commitment is important for overcoming securing timely decisions, bureaucratic barriers, and keeping stakeholder confidence (Jin, 2024; Sukumani, et al., 2024). From an RBV perspective, TMS establishes a valuable, rare, inimitable, and non-substitutable (VRIN) resource that alleviates processes under situations of institutional fragility (Barney, 1991). In developing markets, where institutional weaknesses enhance uncertainty, TMS becomes especially vital in stabilizing processes and confirming continuity despite external disruptions during effective process execution (Jin, 2024; Castro, et al., 2020).

User Involvement (UI)

UI refers to vigorous participation by stakeholders and end-users in system design, requirement definition, implementation, and feedback loops (Petter, et al., 2013; Davis, 2014). UI confirms that project outputs meet operational requirements, reduces resistance to change, and improves knowledge sharing (Bano & Zowghi, 2015).Empirical evidence demonstrates that UI improves process responsiveness, decision accuracy, and ultimate project acceptance (Pinto & Slevin, 1987; Fortune & White, 2006). By inserting users into feedback loops, organizations advance their sensing and replying capacities, important for attaining BPS in volatile settings (Trkman, 2010). Similarly, in MCP contexts, where projects frequently serve multiple end-users with competing interests, structured UI mechanisms help minimize scope creep and manage complexity (Ajmal, et al., 2022). UI is thus considered a knowledge-based behavioral resource that permits process adaptability, critical for achieving BPS (Chemingui, 2025; Wade & Hulland, 2004).

Empirical Justification for Focusing on TMS and UI

This research adopts a scientifically grounded rationale for choosing TMS and UI as critical behavioral enablers of PS, reconceptualized here as BPS. Various empirical researches have recognized TMS and UI as primary behavioral drivers of project and process performance.

Unlike previous studies that broadly listed CSFs without robust comparative validation, this study stresses empirical selectivity and theoretical coherence. For example, Young and Poon (2013) engaged fuzzy-set Qualitative Comparative Analysis (fsQCA) to assess the requirement and sufficiency of CSFs, recognizing TMS as almost always essential (necessary score=0.98) for PS, a value significantly higher than other CSFs, which fluctuated between 0.58 and 0.68. This places TMS as an exclusive and irreplaceable resource within organizational processes. Also, Davis (2014) exposed that across varied stakeholder groups, especially among senior management, both TMS and UI are supposed as central to PS, signifying their strategic and behavioral application across hierarchical layers. Accompanying these perspectives, Musawir et al. (2017) revealed that effective project governance (enabled by top leadership) impacts PS both directly and indirectly via better benefit management, highlighting the integrative governance function of TMS. Similarly, Zwikael (2008) established that TMS significantly associates with PS across cultures and multiple sectors, though its application must be context-sensitive. Broadening the scope, Petter et al. (2013)

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synthesized conclusions from over 140 researches and acknowledged TMS and UI among the most consistently impactful variables motivating IS success. Placed within the Leavitt Diamond framework, these variables were shown to contribute not only to system implementation but also to overall organizational performance. The convergence of these results justifies the selection of TMS and UI in this research as behavioral micro-foundations of BPS (Arcidiacono,et al., 2023). This method diverges from conventional CSF models by employing evidence-based construct prioritization and linking behavioral variables with internal performance processes, especially in large-scale projects within complex settings like those found in developing economies (Brammer & Walker, 2011). These discoveries suggest that behavioral enablers offer unique explanatory power beyond structural or technical factors, creating them central to this study's conceptual framework.

Top Management Support and Business Process Success

TMS has long been recognized as a CSF for effective project execution (Bevilacqua, et al., 2025). It provides strategic legitimacy, resource allocation, conflict resolution, and decision-making authority (Biernikowicz, et al., 2025; Turner & Müller, 2005), all of which are indispensable for process alignment and continuity. In MCPs, where uncertainties stem from political interference, fragmented governance, and funding volatility (Saravana, et al., 2025; Qazi, et al., 2016), TMS acts as a stabilizing force, ensuring timely decisions and priority setting across competing interests.

From an RBV perspective, TMS represents a valuable, rare, inimitable, and non-substitute (VRIN) resource that empowers project teams to reduce process friction, enhance coordination, and maintain stakeholder alignment (Barney, 1991; Wade & Hulland, 2004). Empirical studies consistently link strong managerial support to improved process performance, planning quality, and benefit realization (UI Musawir et al., 2017; Petter et al., 2013).

Thus, we hypothesize:

H1: TMS has a significant and positive effect on BPS in MCPs. (Saravana, et al., 2025; Zwikael, 2008; Ul Musawir, et al., 2017; Barney, 1991; Trkman, 2010; Young & Poon, 2013; Pinto & Slevin, 1987).

User Involvement and Business Process Success

UI reflects the active participation of end-users and stakeholders in planning, decision-making, implementations, and feedback loops (ME de Waal & Batenburg, 2014; Davis, 2014). UI enhances process relevance, knowledge integration, and adaptability to evolving requirements (Bano & Zowghi, 2015). In MCPs, where diverse stakeholders often have conflicting expectations (Constant & Johnsen, 2025), UI creates feedback-driven mechanism that prevent misalignments, reduce rework, and improve acceptance of project deliverables (Wynn & Maier, 2022; Fortune & White, 2006).

Under the RBV lens, stakeholder knowledge and participation are intangible yet strategically important assets, difficult for competitors to replicate (Barney, 1991). UI strengthens organizational sensing and learning capabilities, enabling real-time process adjustments and enhancing executional quality (Petter et al., 2013; Wade & Hulland, 2004). Empirical research highlights that projects with structured user participation are more likely to achieve intended benefits and long-term process improvements (Pinto &

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Slevin, 1987; Davis, 2014).
Hence, we propose:
H2: UI has a significant and positive effect on BPS in MCPs. (Wynn & Maier, 2022; Davis, 2014; Petter, et al., 2013; Seddon, et al., 2010; Turner & Müller, 2005; vom Brocke & Mendling, 2018).

BPM Lifecycle in the Context of MCPs: Integrating Behavioral Enablers

The BPM lifecycle is a structured method to designing, executing, monitoring, and refining organizational processes to attain strategic goals (Dumas, et al., 2018). In the context of MCPs, characterized by multiple stakeholders, complexity, and dynamic external settings, the BPM lifecycle helps as a vital governance mechanism for accomplishing BPS (Zhang, et al., 2025). Conventionally, BPM has concentrated on technical tools and process modeling techniques, frequently understating the behavioral enablers that guarantee process adoption and execution quality (Scavarda, et al., 2025). This research integrates TMS and UI as critical behavioral capabilities within the BPM lifecycle, grounded in the RBV of the firm (Barney, 1991).This can be seen in Table 1.

Process Identification and Modeling: Establishing Strategic Alignment

The BPM lifecycle initiates with process identification, where project managers and business analysts collaborate to map critical processes using modeling tools (Dumas et al., 2018). In MCPs, this stage needs strong TMS to confirm that process models align with organizational strategy and obtain adequate executive sponsorship (Martinez Lagunas & Nik-Bakht, 2024). TMS legitimizes allocates resources, process priorities, and resolves conflicts among competing project requirements (Zwikael, 2008; Young & Poon, 2013). From an RBV perspective, TMS plays as a valuable and rare organizational capability, confirming that process modeling imitates strategic imperatives and is backed by sustained leadership support.

Process Analysis and Redesign: Integrating User Knowledge

Process analysis and redesign involve identifying redundancies, inefficiencies, and bottlenecks in the current workflow. UI is mainly critical at this stage, as it integrates tacit knowledge from on-ground contractors, stakeholders, and end-users, allowing a more realistic and context-sensitive redesign (Barki & Hartwick, 1994; Kovach, et al., 2024). UI aids as a strategic knowledge feedback tool, validate design assumptions, serving refine process flows, and increase the likelihood of process acceptance and successful implementation (Bano & Zowghi, 2015). Within the RBV framework, UI improves the firm's knowledge-based assets, making processes more adaptive and resilient in complex MCP settings.

Process Implementation: Behavioral Enablers as Execution Catalysts

During process execution, TMS confirms timely decision-making, effective coordination, and problem resolution. Executive leaders facilitate resource mobilization, remove organizational barriers, and provide political backing for project initiatives, which is particularly vital in Pakistan's MCP sector, where political interference and governance fragmentation are prevalent (Ayat, et al, 2023; Pereira, et al., 2019). Alongside, UI nurtures minimizes resistance, stakeholder commitment, and

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confirms that implementation adheres to user prospects, bridging the gap between design and practical usage.

Process Monitoring and Control: Feedback Loops for Continuous Improvement

BPM highlights ongoing monitoring and performance valuation through predefined Key Performance Indicators (KPIs) (van der Aalst, 2012). In MCPs, joint TMS-UI mechanisms permit real-time feedback loops, where senior leaders paly on user signals to resolve emergent conflicts, correct deviations, and environmental changes or adapt to regulatory. This dynamic interaction certifies that process governance remains strategically fluid, improving BPS even under uncertainty.

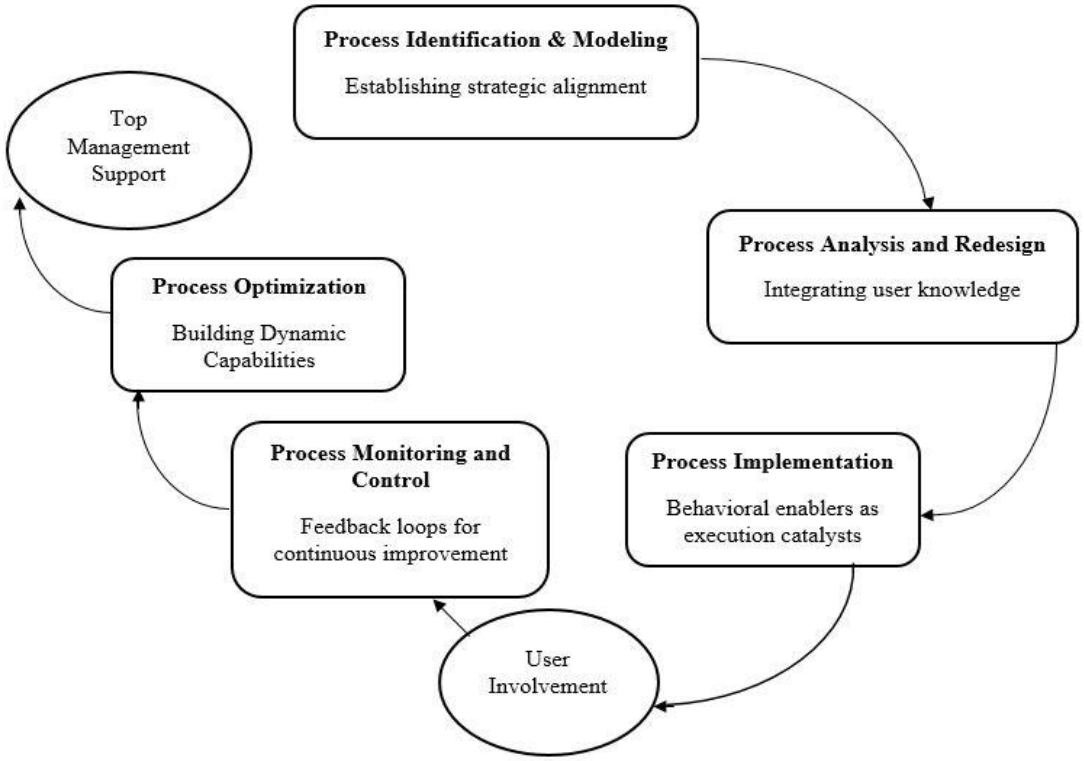


Figure 1. BPM Lifecycle for MCPs

Process Optimization: Building Dynamic Capabilities

The final stage focuses on process learning and continuous improvement. TMS enables allocating resources for long-term process capability development, a culture of adaptive governance, while UI confirms institutional learning from past projects, inserting best practices into organizational memory (Giacosa, et al., 2018; Teece, et al., 1997). Observed through the RBV lens, the integration of TMS and UI shapes organizational routines, dynamic capabilities that enable seizing, sensing, and transforming processes to sustain competitive advantage in MCP delivery.

So, within the lifecycle, UI aids not only as a co-creation mechanism but also as a strategic early warning system that capable of emerging risks, detecting misalignments, and usability views at early stages. This sensory utility enables proactive course correction, contingent on the enabling setting shaped by TMS. Therefore, a durable

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sense of UI stimulates more proactive TMS, finally leading to more active business process execution. More, by implanting TMS and UI within each stage of the BPM lifecycle, this framework underscores their role as behavioral micro-foundations of process success (Januszek,et al., 2024). Unlike conventional BPM methods that highlight technical and tools artifacts, this RBV-based perspective places leadership engagement and stakeholder involvement as strategic resources that significantly improve adaptability, process efficiency, and long-term performance in complex infrastructure projects.

Integrating TMS and UI in BPM

While TMS and UI have been independently linked to project outcomes, their collective effect on BPS rests underexplored. TMS creates a permitting climate and allocates resources that enable effective user participation, while UI offers bottom-up feedback that improves process accuracy and adaptability (Davis, 2014; Zwikael, 2008). This synergistic association gives to continuous process improvement and lessens governance gaps (Martins, et al., 2025; Zureehan & Lee, 2022). Previous study in BPM highlights that process success relies not only on structural enablers but also on the incorporation of leadership and user perspectives to handle uncertainty and improve responsiveness (Rosemann & vom Brocke, 2014; Trkman, 2010). Still, empirical models capturing these dynamics in developing market contexts are limited, leaving a significant study prospect to test behavioral enablers of BPS systematically for MCPs.

Linking MCP and BPS

MCP vary from classical projects due to their scale, multi-stakeholder involvement, complexity, and institutional uncertainties (Xia & Xiang, 2023; Flyvbjerg, 2011). As such, conventional outcome-based success dealings frequently fail to capture the process-level dynamics that conclude project viability (Cagnin & Nakagawa, 2021). BPS proposals a granular, diagnostic lens to assess how well planning, coordination, monitoring, and execution are achieved in MCPs. By concentrating on internal process success rather than only final consequences, researchers and practitioners can well recognize why projects derail and how to progress execution quality in real-time (Trkman, 2010; Rosemann & vom Brocke, 2015). This research adopts BPS as the dependent construct to address these gaps, especially in Pakistan's MCP sector, where process instability challenges long-term performance.

Theoretical Framework: Resource-Based View (RBV)

The RBV offers a strategic lens for understanding how behaviorally embedded resources, intangible, like user knowledge and leadership commitment, drive sustained process performance (Barney, 1991; Wade & Hulland, 2004). TMS and UI align the VRIN criteria, creating them potential sources of advantage in complex project settings where resources cannot be easily substituted or replicated (Sirmon et al., 2007).

By inserting these behavioral enablers into BPM frameworks, this research conceptualizes BPS as the conversion mechanism through which leadership and user participation convert organizational capabilities into quantifiable, process-level success (Musawir et al., 2017; Trkman, 2010).

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Gaps in the Literature

Despite strong theoretical and empirical aid for behavioral enablers, limited study explicitly associates TMS and UI to BPS, especially in MCPs in developing economies. The majority of CSF researches highlight final project conclusions, ignoring process-level success signs and behavioral dynamics affecting execution quality (Fortune & White, 2006; Pinto & Slevin, 1987). More, research from developing economies is rare, where process governance encounters are magnified by political interference, institutional instability, and resource constraints (Finney & Corbett, 2007; Mielcarek, et al., 2025; Qazi, et al., 2016).

Given Pakistan's institutional volatility, high project failure rates, and fragmented governance, inspecting BPS via the lens of TMS and UI offers both theoretical advancement and practical insights. This research fills these gaps by suggesting and testing a behaviorally grounded, process-focused framework for MCP success.

Therefore, by incorporating behavioral enablers with BPS and inserting them within the RBV standard, this study offers a robust foundation for future investigations into how intangible organizational competencies transform into operational and strategic success. So, proposed framework for study presents in Table 2.

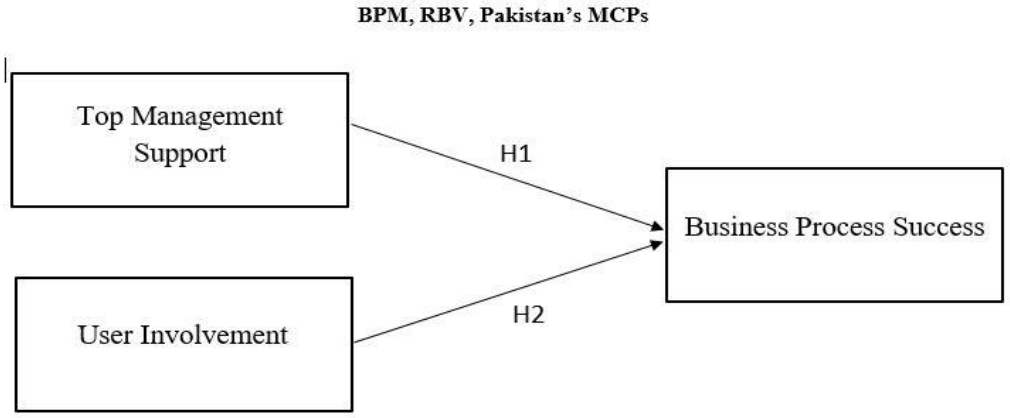


Figure 2. Proposed Framework
Source: Author's own work

Methodology

This research adopts a deductive, cross-sectional survey design, quantitative, and positivist study design, consistent with the epistemological traditions of theory testing and structural modeling. Grounded in the RBV, the study empirically examines how behavioral capabilities effect BPS. These latent constructs were operationalized through quantifiable indicators to permit for statistical validation of theoretical associations (Hair , et al., 2017; Creswell & Creswell, 2014).

Instrument Development and Pilot testing

The research adapts and integrates validated measurement items from established literature (e.g., Tables I, II & III) and refines them through a pilot study with domain experts. More, constructs of IVs and DV were drawn from relevant PM and BPM behavioral literature, adjusted to reflect process-oriented success dimensions.

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Therefore, TMS, UI, and BPS constructs were recontextualized from a validated items from relevant scales.

The instrument, an exploratory structured questionnaire survey, covered three latent constructs. All items were rated on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).A pilot test with 20 industry professionals was engaged to confirm construct validity, clarity, and item reliability. Cronbach's α values for all constructs exceeded the 0.70 threshold, inspecting internal consistency (Nunnally & Bernstein, 1994).

This study is grounded in the RBV of the firm, which suggests that intangible resources like VRIN capabilities that improve process performance (Barney, 1991; Wade & Hulland, 2004). Within the domain of BPM, TMS and UI are recognized as CSFs that significantly influence BPS in complex, high-stakes megaprojects (Hung, 2006; Schmiedel, et al., 2014; Rubel, et al., 2023).

TMS confirms strategic alignment, legitimizes process initiatives, allocates resources effectively, and sustains governance mechanisms that enable process optimization (Chu, et al., 2017; Yu-Yuan Hung, et al., 2007). Meanwhile, UI reinforces knowledge feedback loops, improves adaptability, and confirms that process solutions are contextually relevant and widely accepted by stakeholders (Zhang et al., 2024; Rubel et al., 2023). Empirical evidence proposes that the synergy of these behavioral enablers directly contributes to enhancing efficiency, stakeholder satisfaction, effectiveness, innovation, and cost-performance consequences (Pinto & Prescott, 1987; Hung, 2006; Davis, 2014).

Therefore, during developments of questionnaires of TMS, UI and BPS, study aligns it with mega construction, RBV and emerging economies within the domain of BPM. Each item of questionnaire of IVs and DV has support of literature, and references. More, the 13 indicators of BPS were mapped to the estimated effect pathways of TMS and UI based on previous literature and theoretical reasoning.

Table I. Item-level mapping of TMS questionnaire details

TMS Items	Indicator Description	Supporting Literature
TMS1	Our top managers proactively support BP practices in this megaproject.	(Chu, et al., 2017)
TMS2	Gaining control of process management initiatives.	(Hung, 2006)
TMS3	Top management provides support for process transformation initiatives.	(Wade & Hulland, 2004)
TMS4	The managers endorse the new values and beliefs necessitated by the proposed process.	(Yu-Yuan Hung, et al., 2007)
TMS5	Top management freely share information in our organization.	(Gable, etal., 2003)

Source: Author's own work.

Table II. Item-level mapping of UI questionnaire details

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UI Items	Indicator Description	Supporting Literature
UI1	BP practices in this megaproject improves communication, coordination, and collaboration among the firm's stakeholders.	(Zhang, et al., 2024)
UI2	People working on business processes are not the same people working in software engineering to develop the system.	(Gruhn & Laue, 2007)
UI3	I can suggest improvements in the way things are done in the organization.	(Rubel, et al., 2023)
UI4	It was easy for me to adjust to the new technology introduced in my organization.	(Rubel, et al., 2023)
UI5	I have contributed to innovations that fundamentally changed my products/services.	(Rubel, et al., 2023)

Source: Author's own work.

Table III. Item-level mapping of BPS questionnaire details

BPS Items	Indicator Description	Linked Hypotheses & Supporting Literature
BPS1	Participating organization gain significant local and/or overseas business opportunities through our BP efforts.	(Pastrana & Sriramesh, 2014)
BPS2	BP practices in this megaproject improves communication, coordination, and collaboration among the firm's stakeholders.	(Loosemore & Lim, 2017)
BPS3	In the design stage, there is the management of the design scheme's cost and quality.	(Yang, et al., 2022)
BPS4	The organization safeguards the rights and interests of participating employees in this megaproject.	(Ma, et al., 2020)
BPS5	The organization discloses project information in this megaproject timely.	(Lin, et al., 2017)
BPS6	There are many innovations and new technologies in the megaproject.	(Ma, et al., 2020)
BPS7	BP practices in this megaproject provide a competitive advantage to participating organizations.	(Juščius, et al., 2013)
BPS8	Our organization regularly implements best practices that improve business processes.	(Schmiedel, et al., 2014)
BPS9	The proactive and responsive attitude towards the needs of process output recipients facilitates by organization.	(Schmiedel, et al., 2014)

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BPS10	Social responsibility efforts in this megaproject significantly improve participating organization's reputation and brand image.	(Lin, et al., 2017)
BPS11	Organization's competitive position improved over last two years.	(Hung, 2006)
BPS12	Productivity of employees increased over last two years.	(Hung, 2006)
BPS13	Average cost per unit of product or service decreased over last two years.	(Hung, 2006)

Source: Author's own work.

Below given work covers alignment anchors TMS, UI, and BPS items in RBV, MCP contexts, and developing economies for behavioral resources, ensuring theoretical coherence and domain relevance for BPM research by covering all critical BPM domains.

People (Human Resources Capital)

TMS: TMS1 (preemptive managerial support), TMS3 (support for process transformation advantages), RBV: human resource promise for BPS (Wade & Hulland, 2004).

UI: UI3 (suggesting progresses), UI5 (contributing to innovations), Employees' knowledge contributions for MCP conclusions (Rubel et al., 2023).

BPS: BPS12 (employee productivity growth), BPS4 (safeguarding workers' rights).

Strategic Alignment (Organizational Capitals)

TMS: TMS2 (acquisition control of initiatives), TMS4 (ratifying new values), supporting BP aims with corporate strategy (Hung, 2006).

UI: UI1 (improving communication and coordination), stakeholder engagement supporting process results with purposes (Zhang et al., 2024).

BPS: BPS1 (ahead business opportunities), BPS7 (competitive advantage).

Governance (Process & Project Governance Capitals)

TMS: TMS5 (information distribution by top management), apparent governance in MCPs (Gable, et al., 2003).

UI: UI2 (cross-functional process participation), collective governance structures (Gruhn & Laue, 2007).

BPS: BPS5 (timely information expose), BPS9 (responsiveness to process requirements).

Technology (IT Capitals)

TMS: TMS3 (support for transformation creativities), managerial backing for digital process performance (Yu-Yuan Hung, et al., 2007).

UI: UI4 (adjusting to new technology), UI5 (contributing to technological innovations).

BPS: BPS6 (acceptance of new technologies), BPS12 (better employee productivity through tech support).

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Process Design and Modeling (Knowledge Capitals)
TMS: TMS2 (control of initiatives), strategic design support in MCPs (Hung, 2006).
UI: UI2 (diverse perspectives on process design), comprehensive design increases quality (Gruhn & Laue, 2007).
BPS: BPS3 (cost and quality management in design stage), BPS8 (applying best practices in process design).

Process Execution (Operational Abilities)
TMS: TMS1 (preemptive managerial support for execution), confirming process adherence (Chu et al., 2017).
UI: UI3 (signifying operational developments), UI4 (alteration during execution).
BPS: BPS2 (enhanced collaboration and communication), BPS10 (improved reputation through actual execution).

Process Monitoring and Optimization (Dynamic Abilities)
TMS: TMS5 (information distribution for monitoring improvement).
UI: UI3 (continuous feedback loop for developments).
BPS: BPS9 (reactive attitude to recipients' requirements), BPS13 (reduced cost per unit through optimization).

Performance Measurement (Conclusion Assessment)
TMS: TMS1, TMS2 (facilitating resources and leadership for performance chasing).
UI: UI5 (innovations leading to quantifiable enhancements).
BPS: BPS11 (competitive position upgrading), BPS12 (member efficiency), BPS13 (cost decrease).

Business Process Redesign Framework (Knowledge & Revision)
TMS: TMS4 (approving new beliefs and values for change management).
UI: UI3, UI5 (employee-driven redesign proposals).
BPS: BPS8 (best practice application), BPS6 (technological modernizations).

IT Investment (Technology Capitals)
TMS: TMS3 (provision for tech-based transformation).
UI: UI4 (alteration to IT systems).
BPS: BPS6 (incorporation of new technologies).

Culture (Organizational Culture as a Soft Resource)
TMS: TMS4, TMS5 (open communication culture, values endorsement,).
UI: UI1, UI3 (culture of feedback and collaboration).
BPS: BPS8, BPS9 (continuous improvement and culture-driven responsiveness).

This research makes a novel and robust contribution to literature. Unlike previous BPM study that frequently isolates execution, process modeling, or technology factors, this study fully assimilates behavioral enablers into the BPM lifecycle, recognizing them as inimitable and valuable proficiencies that allow justifiable competitive advantage (Barney, 1991; Wade & Hulland, 2004).

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The questionnaire items for TMS, UI, and BPS are systematically derived from empirically validated measures in prior studies on BPM governance, mega projects, and RBV-based organizational performance (Hung, 2006; Schmiedel et al., 2014; Rubel et al., 2023), ensuring contextual relevance, construct reliability, and theoretical alignment. These items collectively cover all critical BPM domains, thereby providing an inclusive, behaviorally attached framework that ignores no dimension of BPM unaddressed.

Therefore, research in MCP literature that maps RBV's intangible behavioral resources to quantifiable constructs and links them to BPS conclusions across 13 performance indicators, depicting a long-standing study gap in integrating microfoundational behavioral drivers into BPM success models (Teece, 1997; Too & Weaver, 2014). By doing so, the study bridges the separate between PM and BPM domains, advances theory-building on behavioral capabilities, and gives actionable visions for project governance and strategic process alignment in resource-constrained developing economies.

Population, Sampling, and Collection

The target population contained construction firms registered with the Pakistan Engineering Council (PEC), the apex regulatory authority for accreditation and project licensing (PEC, 2023). As of February 2025, 413 firms were recorded under active contractor categories, containing C1 and C2 classifications.

A sample size of 200 firms was using Krejcie and Morgan's (1970) formula, which confirms statistical power for populations under 417 at a 95% confidence level and ±5% margin of error. This sample also covers the minimum criteria for partial least squares structural equation modeling (PLS-SEM) (Hair et al., 2021).

Similarly, a simple random sampling technique was employed to improve generalizability and lessen selection bias (Etikan et al., 2016). Questionnaires were sent to firm representatives (including project managers, architects, engineers, and user-side stakeholders) with follow-up phone calls to increase response rates. Of the 200 circulated surveys, 121 responses were received. After removing four incomplete entries, 117 responses persisted for analysis.

Data Analysis Technique

SmartPLS 4 was applied for data analysis. PLS-SEM was selected for its suitability in valuing complex models with reflective constructs and its strength with small to medium samples. The two-step method involved evaluating the measurement model for reliability and validity, charted by structural model valuation to test hypotheses. More, internal consistency was measured by Cronbach,s Alpha and composite reliability (CR). Convergent validity was confirmed through Average Variance Extracted (AVE), while discriminant validity was established using the Fornell-Larcker criterion and HTMT ratios. Additionally, path coefficients were assessed for significance through bootstrapping. Predictive precision was evaluated using R^2, while Q^2 tested predictive relevance and model fit. The effects provide empirical provision for the hypothesized associations between behavioral enablers and BPS.

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Results and Discussion

Descriptive Analysis

Table IV. Demography

Gender	Male	103
	Female	14
Role	Project Managers	47
	Contractors	23
	Architects	20
	End Users	27
Education	Bachelor	86
	Master	23
	M. Phil	7
	Ph.D.	1

According to Table IV., the demographic profile of the respondents reflects a diverse and experienced participant base relevant to the construction sector. Out of 117 valid responses, 103 were male and 14 were female, indicating the male-dominated nature of the industry in the Pakistani context. In terms of professional roles, 47 respondents identified as project managers, 23 as contractors, 20 as architects, and 27 as end users, ensuring broad representation across key stakeholder groups involved in project delivery.

Educational qualifications further confirm the professional credibility of the sample. The majority held bachelor's degrees (n = 86), followed by master's degree holders (n = 23), M.Phil. Graduates (n = 7), and one Ph.D. holder. This distribution suggests that the respondents possessed sufficient academic and practical grounding to provide informed and contextually rich insights into the constructs of top management support, user involvement, and project success.

Model Measurement

The suggested hypotheses described in the conceptual model have been certified by using (Statistical Social Science System version 22) SPSS v.22. Data were analyzed using SmartPLS 4. PLS-SEM suits small-to-medium samples and non-normal data distributions (Hair et al., 2017). Reliability was assessed via Cronbach's α and composite reliability (CR); convergent validity via Average Variance Extracted (AVE); and discriminant validity via HTMT and the Fornell–Larcker criterion (Henseler et al., 2015; Fornell & Larcker, 1981). Structural paths were bootstrapped with 5,000 resamples with one tail, and effect sizes (f^2) evaluated individual predictor impact. These items of IVs and DV confirms, the convergence of such behavioral mechanisms is hypothesized to make a vigorous capability that improves the organization's capability to sense, interpret, and act upon internal and external contingencies.

Reliability and Validity Analysis

Table V. Construct reliability and validity

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Constructs	Items	Loadings	CronBach,s Alpha	Composite Realability (rho-c)	Composite Realability (rho-a)	Average Variance Extract (AVE)
TMS	TMS 1	0.861				
	TMS 2	0.794				
	TMS 3	0.840				
	TMS 4	0.864				
	TMS 5	0.869	0.901	0.926	0.906	0.716
UI	UI1	0.836				
	UI2	0.877				
	UI3	0.873				
	UI4	0.819				
	UI5	0.906	0.914	0.936	0.915	0.744
BPS	BPS1	0.756				
	BPS2	0.581				
	BPS3	0.775				
	BPS4	0.808				
	BPS5	0.723				
	BPS6	0.828				
	BPS7	0.692				
	BPS8	0.728				
	BPS9	0.822				
	BPS10	0.846				
	BPS11	0.744				
	BPS12	0.829				
	BPS13	0.832	0.942	0.949	0.946	0.593

To ensure the internal consistency and construct validity of the measurement model, this study followed established guidelines in Partial Least Squares Structural Equation Modeling (PLS-SEM), as outlined by Hair et al. (2017) and Fornell and Larcker (1981) in Table V. Specifically, reliability was evaluated using Cronbach,s alpha and CR (ρ_c and ρ_a), while convergent validity was assessed through AVE. All three latent constructs (BPS, TMS, and UI) exhibited Cronbach's alpha

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values well above the 0.70 threshold, indicating strong internal consistency (Nunnally & Bernstein, 1994). BPS scored 0.942, TMS 0.901, and UI 0.914, surpassing the commonly accepted benchmark.

Complementing Cronbach's alpha, composite reliability (ρ_c) values for each construct also exceeded the 0.70 minimum, with BPS at 0.949, TMS at 0.926, and UI at 0.936, providing evidence of high construct reliability (Hair et al., 2021). Moreover, the alternative composite reliability coefficient (ρ_a), advocated by Dijkstra and Henseler (2015) to overcome limitations of traditional metrics, confirmed these findings, with all constructs scoring above 0.90.

Convergent validity was established through AVE, with all values exceeding the 0.50 threshold recommended by Fornell and Larcker (1981): BPS = 0.593, TMS = 0.716, and UI = 0.744. These results indicate that more than 50% of the variance in each construct's indicators was captured, validating the adequacy of the latent variables in representing the theoretical constructs. Collectively, these findings confirm that the measurement model meets all necessary reliability and validity criteria, thus providing a solid empirical foundation for further structural model analysis.

Discriminant Validity

To establish discriminant validity within the measurement model, the study employed both the Fornell-Larker criterion (Table VI) and the Heterotrait-Monotrait (HTMT) ratio (Table VII) of correlations, in line with best practices in PLS-SEM (Hair et al., 2017; Henseler et al., 2015). According to the Fornell–Larcker criterion, discriminant validity is confirmed when the square root of the AVE for each construct exceeds its corresponding inter-construct correlations. As shown in the correlation matrix, all diagonal values (i.e., √AVE) were greater than their respective off-diagonal elements, thereby satisfying this criterion (Fornell & Larcker, 1981).

In addition, HTMT ratios for all construct pairs remained below the conservative threshold of 0.85, further supporting discriminant validity (Henseler et al., 2015). The highest observed HTMT value was 0.810, recorded between TMS and BPS, well within the acceptable limit. These findings reinforce the distinctiveness of each latent construct and ensure that the measurement model is free from multicollinearity and conceptual overlap. Thus, the application of both legacy and modern criteria offers robust evidence that the constructs in the model are empirically distinct and theoretically sound.

Table VI. Fornell-Larcker criterion

	BPS	TMS	UI
BPS	**0.770**		
TMS	0.755	**0.846**	
UI	0.723	0.506	**0.863**

Table VII. Heterotrait-Monotrait ratio (HTMT) – Matrix

	BPS	TMS	UI
BPS			
TMS	0.810		

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UI	0.773	0.552

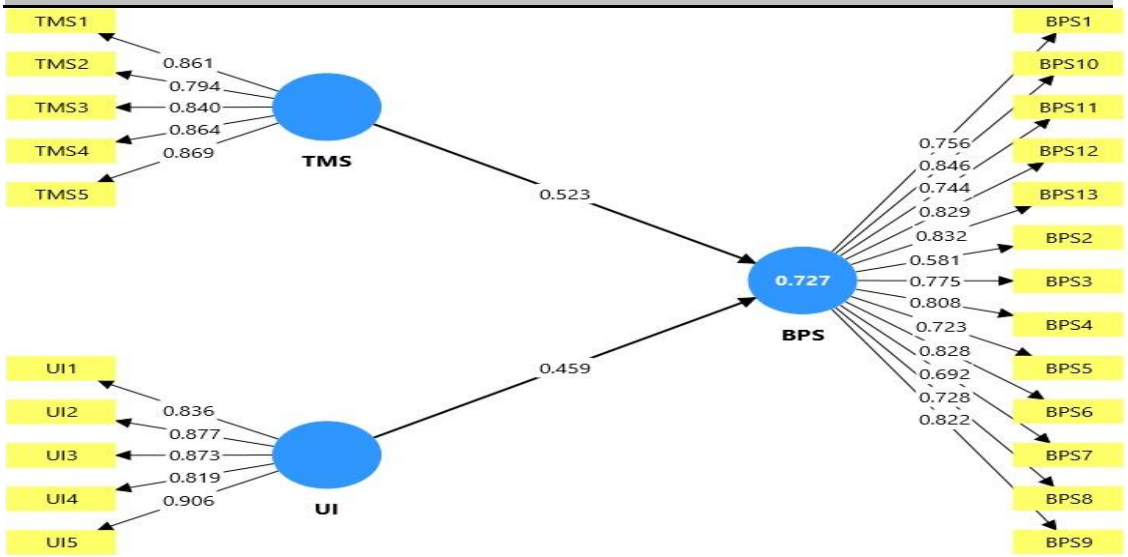


Figure 3. Results of Direct Analysis

Table VIII. Results of Direct Effects for Full Sample Analysis

Hypothesis	Relationship	Path Coefficient (β)	T statistics	P values	Decision	f-square
H1	TMS -> BPS	0.523	4.794	0.000	Supported	0.744
H2	UI -> BPS	0.459	4.776	0.000	Supported	0.573

Table IX. R-square

	R-square	R-square adjusted
BPS	0.727	0.722

Table VIII and Figure 3 explained, structural path analysis indicated that TMS (β=0.523, p<0.000) and UI (β=0.459, p<0.000) exert significant, positive effects on BPS, supporting H1 and H2. As per Table XI., together, these predictors explain 72.7 % of the variance in process success ($R^2 = 0.727$), surpassing Cohen's (2013) benchmark for substantial explanatory power and well above the 0.26 benchmark for substantial explanatory power in behavioral research (Hair et al., 2017). Effect-size estimates reinforce this: TMS (f^2=0.744) registers a large impact, while UI (f^2=0.573) exhibits a medium-to-large effect.

Therefore, these findings support H1 and H2, confirming the individual importance of both behavioral constructs in driving process outcomes.

According to Shmueli et al. (2019), Q^2_predict values above 0 indicate that the model has predictive power, while higher thresholds (e.g., >0.35) suggest large predictive relevance. Your value of 0.680 far exceeds these benchmarks, indicating that the integrated behavioral enablers (Top Management Support and User Involvement) and the BPM methodology provide a substantially strong basis for predicting BPS outcomes

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in your context.

Discussion, Limitations, and Conclusion

Discussion

This research set out to observe the role of behavioral enablers, TMS and UI, in determining BPS within MCPs in Pakistan. The outcomes offer compelling sign that behavioral governance mechanisms are pivotal for process-level success, inspiring conventional notions that concentrate primarily on reengineering and technical process design (Trkman, 2010; vom Brocke & Mendling, 2018). Precisely, TMS occurred as foundational enabler, providing strategic sustained resource commitment, legitimacy, and organizational prioritization for process starts (Young & Poon, 2013; Zwikael, 2008). Equally, UI strengthens operational adaptability, confirming that mitigating misalignment risks, end-user needs inform decision-making, and nurturing shared ownership of consequences (Davis, 2014; Petter et al., 2013). Collected, these enablers form a behaviorally grounded process ecosystem that energies executional integrity and process flexibility under uncertainty.

More, the model yielded an R^2 value of 0.727, representing that TMS and UI explain 72.7 % of the variance in BPS. According to Hair (2014), this constitutes a moderate-to-substantial level of explanatory power in PLS-SEM models. The comparatively high R^2, attained using only two predictors, supports the theoretical power of these CSFs and their practical sufficiency in explaining complex performance results. These outcomes support the prioritization of behavioral and stakeholder-aligned strategies in project governance frameworks, especially in the construction sector of emerging economies. So, these constructs justify their conduct not merely as reassuring factors but as core strategic resources that directly contribute to sustained process performance.

Theoretical Contributions

This study advances the theoretical discourse in BPM by embedding behavioral micro-foundations into the thoughtful of process success, a dimension often overshadowed by technological, modeling techniques, structural, process optimization tools , and methodological determinants (vom Brocke & Mendling, 2018; de Bruin & Rosemann, 2007; Trkman, 2010).This fragmented method disregards the strategic role of behavioral resources in changing governance quality, process agility, and stakeholder alignment, especially in complex MCPs of developing economies, where stakeholder fragmentation and institutional volatility are noticeable (Ahmed et al., 2019; Ali et al., 2021). Building on the RBV, it launches that intangible behavioral resources (like, TMS and UI) keep VRIN properties that can be strategically leveraged to cover process advantage (Barney, 1991; Shao et al., 2012).

By conceptualizing BPS as a dynamic capability evolving from participatory engagement and leadership commitment, this research bridges the persistent theoretical divide between project management's CSF literature (Pinto & Slevin, 1987; Musawir et al., 2017) and BPM scholarship, so presenting a behaviorally anchored framework for process performance.

Drawing on dynamic capabilities theory, open system theory, and project governance frameworks, this study reframes behavioral CSFs (specifically TMS and UI) not as

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isolated project inputs but as strategic bridging mechanisms that link internal process execution with external stakeholder value transfer (Maylor, et al., 2018). Moving beyond checklist-based CSF models, it theorizes these behavioral enablers as fluid adaptation levers, aligning process governance, decision-making, and execution tractability to meet regulatory demands and evolving stakeholder resulting continuous improvement (Teece, 1997; Katz & Kahn, 1978; Too & Weaver, 2014).

This method validates how human-centric resources complement technical, providing governance quality, process agility, and responsiveness in MCPs where institutional volatility and stakeholder fragmentation are dominant (Ahmed et al., 2021; Ali et al., 2021).

More, by incorporating insights from dynamic capabilities, RBV, and project governance theories, this study provides theoretical contributions. First.it places behavioral capabilities as strategic organizational assets within BPM, affecting the field beyond technical determinism. Second, it deals rare empirical evidence from high-impact MCPs in a developing economy, encompassing BPM applicability to volatile institutional environments. Third, it suggests a parsimonious yet powerful model that operationalizes behavioral resources as quantifiable, testable indicators of BPS. Fourth, this study advances BPM theory by conceptualizing BPS as a dynamic ability driven by continuous improvement cycles, underpinned by the interaction of internal and external environments. TMS offers the strategic resources, legitimacy, and governance structure essential to sustain adaptive initiatives, while UI confirms iterative improvements are informed by operational realities and stakeholder insights. The integration of these behavioral enablers' transforms adaptive iterations into structured, enhancing process agility, ongoing improvement pathways, resilience, and long-term strategic alignment in high-uncertainty and complex project environments (Oltra, et al., 2005). Fifth, this research contributes theoretically by putting the BPM methodology as an amalgamating mechanism that bridges the dogged gap between project management success, driven by TMS, and PS, enabled by UI. By implanting both behavioral enablers into a continuous improvement framework, BPM changes isolated managerial oversight and stakeholder participation into an iterative, integrated process. This incorporation not only overcomes mutual misalignments between managerial intent and operational execution but also generates a self-reinforcing cycle of adaptation, confirming sustained process agility, effectiveness, and strategic coherence in dynamic and high-uncertainty settings. Sixth, this shift from project management to lean production with the notion of management philosophy. Lastly, it unites PM and BMP theory under a distinct conceptual lens, providing a pathway for future researches to shape behavioral grounded BPM frameworks that address both process efficacy (internal) and stakeholder legitimacy (external) (Jayaraman & Srivastava, 1996).

Therefore, this multidimensional influence not only enhances BPM theory but also brings practical direction for process leaders, representing how the orchestration of TMS and UI can reshape mitigate uncertainty, process flows, and improve long-term process advantage in large-scale, high-risk project atmospheres.

Practical Contributions

From a managerial viewpoint, the results highlight that technical process redesign alone is insufficient for certifying success in MCPs, especially in volatile institutional settings

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such as Pakistan's infrastructure sector. Officials must institutionalize governance mechanisms that cartel high-level sponsorship with structural user involvement, confirming that resources, decision rights, and information flows are fully aligned throughout the process lifecycle (Turner & Müller, 2005; Zwikael, 2008). The research proposals a behavioral blueprint for private and public sector leaders, comprising:
Creating consistent and visible executive involvement in process governance;
Implanting feedback-driven, iterative decision-making loops to seizure end-user necessities dynamically; improving process agility to navigate regulatory, political, and stakeholder complexities common to developing markets (Ali et al., 2021).
So, such performs not only mitigate the risks of systemic inadequacies but also shape long-term organizational competence for sustained process success (Bryde, et al., 2023). Therefore, in this institutional and operational vacuum, behavioral resources like TMS and UI occur not as marginal enablers but as critical anchors for enabling real-time responsiveness and adaptive governance.

Limitations and Future Research Directions

Despite its contributions, this study has limitations that should guide future inquiry. First, the sample concentrated on PEC-registered firms in Pakistan, which may restrict the generalizability of outcomes across other industries or geographies (Van Looy, et al., 2011). Future research should replicate and extend this model in diverse institutional environments, containing digitally transformed process or private sector-driven settings. Second, the research employed a cross-sectional design, limiting the capability to capture the evolution of behavioral enablers over time. Longitudinal studies could proposal insights into how TMS and UI dynamically interact with process effects across BPM phases. Third, while this research focused on direct effects, future work may examine more intangible behavioral resources in research.

Conclusion

In conclusion, this study provides empirical validation for the debate that enablers (specifically TMS and UI) are not marginal but central to accomplishing BPS in large-scale, high-risk project settings.As such, business processes convert the operational terms of these internal skills, functioning as channels through which behavioral resources are realized.Yet, prevailing BPM researches seldom offer a systematic, empirically grounded framework that captures how these behavioral capabilities drive process-level success in such inspiring contexts. By incorporating these constructs within an RBV framework and changing the performance focus from final PS to process-level outcomes, the research advances BPM scholarship toward a more human-centric paradigm. By locating these soft, behavioral capabilities like strategic enablers, the research supports the idea that process performance is not only a function of operational routines but also of intangible behavioral capital. More, it also brings actionable insights for practitioners pursuing to reinforce governance and awareness in complex project ecosystems. Finally, the discoveries highlight that sustainable process success is not just engineered, it is behaviorally orchestrated.

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