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EVALUATING THE EFFECTIVENESS OF PROJECTS THROUGH TEAM COMPETENCIES AND STRATEGIC MANAGEMENT

ОЦІНЮВАННЯ ЕФЕКТИВНОСТІ ПРОЄКТІВ НА ОСНОВІ КОМАНДНИХ КОМПЕТЕНТНОСТЕЙ ТА СТРАТЕГІЧНОГО МЕНЕДЖМЕНТУ

Project-based work is central to achieving organizational goals, yet performance remains uneven across industries and countries. This study addresses a persistent gap in project evaluation: the limited integration of team competencies and strategic management maturity as joint drivers of effectiveness. Using 900 project-level observations from 20 firms in the U.S., U.K., Germany, and Ukraine (2022–2024), the research applies a four-stage econometric framework with a Project Effectiveness Index (PEI), Team Competency Index (TCI), and Strategic Management

Maturity (SMM). Results show positive effects of TCI (β1=0.131, p<0.01) and SMM (β2=0.089, p<0.01), with their interaction (β3=0.086, p<0.01) confirming complementarity. U.S. and German firms showed the strongest marginal gains, while Ukrainian firms benefited from governance reforms. The study highlights the need for dual investments in human capital and strategy to ensure sustainable project performance.

Keywords: *Project effectiveness, Team competencies, Strategic management maturity, Econometric modeling, Governance, Organizational performance, Cross-country analysis.*

Проєктно-орієнтована діяльність є ключовим механізмом досягнення організаційних цілей, проте рівень її результативності суттєво варіює між галузями та країнами. Актуальність дослідження полягає в подоланні розриву в оцінюванні проєктів через обмежену інтеграцію командних компетентностей та зрілості стратегічного менеджменту як подвійних рушіїв ефективності. Для заповнення цієї прогалини застосовано багатокраїнову економетричну модель, що аналізує взаємодію людського капіталу та управлінських систем у формуванні результатів проєктів. База даних включає збалансовану панель із 900 спостережень на рівні проєктів у 20 компаніях США, Великої Британії, Німеччини та України у 2022–2024 рр. Методика дослідження охоплювала чотири етапи: збір даних, побудову індексів, економетричне моделювання та порівняльний аналіз. Індекс ефективності проєктів (PEI) створено на основі стандартизованих показників вартості, термінів, якості, реалізації вигод і задоволеності. Індекс командних компетентностей (TCI) та показник зрілості стратегічного менеджменту (SMM) побудовано методом головних компонент з урахуванням сертифікацій, досвіду, навчання й управлінських структур. Базова модель із фіксованими ефектами контролювала розмір, складність і метод реалізації проєктів. Результати підтвердили позитивний вплив TCI (β1=0,131, p<0,01) та SMM (β2=0,089, p<0,01) на ефективність, а також комплементарність їхньої взаємодії (β3=0,086, p<0,01). Найвищі граничні ефекти зафіксовано в компаніях США та Німеччини, тоді як українські фірми, попри інституційну крихкість, отримали вигоди від реформ (DiD=0,083). Новизна дослідження полягає в інтеграції мікрорівневих компетентностей і мезорівневого управління в єдину модель, апробовану в різних інституційних контекстах. Висновки акцентують на необхідності подвійних інвестицій у людський капітал і стратегію для підтримання стабільної результативності, а перспективи подальших досліджень охоплюють розширення часових рамок, географії та поєднання кількісних і якісних методів для аналізу культури лідерства та інституційної динаміки.

Ключові слова: *ефективність проєктів, командні компетентності, зрілість стратегічного менеджменту, економетричне моделювання, управління, організаційна результативність, міжкраїновий аналіз*

Statement of the problem. Project-based work has become the cornerstone of organizational development in both private and public sectors, yet project outcomes often vary significantly depending on the quality of team competencies and the level of strategic management maturity. The relevance of this study lies in the growing need to evaluate projects not only through traditional cost–time–scope criteria, but also by analyzing how human capital and governance frameworks interact to drive effectiveness. In a dynamic global environment marked by uncertainty, digital transformation, and institutional shocks, understanding these relationships provides actionable insights for managers, policymakers, and scholars alike.

The problem addressed in this research is the persistent gap between formal project management frameworks and actual project performance across organizations. Many firms continue to invest heavily in project methodologies and tools, yet fail to achieve consistent success due to insufficient attention to the alignment of team skills with strategic oversight mechanisms. This misalignment creates inefficiencies, undermines stakeholder trust, and limits the scalability of best practices across projects and sectors.

Analysis of recent research and publications. Research on project success has shifted from the "iron triangle" toward human- and governance-centric explanations of performance. At the micro level, competencies of managers and teams support knowledge flows, problem solving, and adaptive coordination. In open-innovation contexts, competence becomes crucial for boundary spanning and absorptive capacity (Oh & Choi [1]). In developing economies, project managers function as "knowledge workers," and competence portfolios (technical, behavioral, contextual) predict delivery quality even under institutional frictions (Amoah & Marimon [3]). Public sector studies confirm that front-end planning and managerial competence improve complex program outcomes (Irfan et al. [8]). Thus, competence consistently acts as a micro-foundation of effectiveness.

Parallel literature stresses strategic management maturity as the meso-level structure that translates competencies into value. In smart-building projects, Rodrigues et al. [2]) link project-manager competencies to governance, stakeholder integration, and digital coordination – components of maturity. De Araújo et al. [4] highlight that governance quality conditions whether capabilities yield results, while Moghaddasi et al. [9] propose Value Delivery Offices to reframe governance around outcome realization.

Success measurement is also evolving. Sastoque-Pinilla et al. [6] demonstrate that stakeholder-defined, multi-criteria indices better capture effectiveness than cost – schedule metrics. At the portfolio level, Al-Sobai et al. [10] show that selection capabilities – option evaluation, risk–benefit alignment, prioritization – mediate the intent–outcome link. These findings motivate the development of a multidimensional Project Effectiveness Index (PEI) and a Strategic Management Maturity (SMM) index, and testing their joint effects.

Institutional context matters as well. Ranasinghe et al. [5] show that adoption of methodologies in local governments depends on readiness, leadership, and cul-

ture – factors reflecting maturity differentials. Holubčík et al. [7] illustrate that sustainable teamwork is shaped by organizational systems (training, incentives, communication). These studies underline that competence without governance scaffolding yields fragile gains, while governance without competence creates inertia.

Comparative analysis reveals three convergences. First, competencies and governance are complementary: skills enable problem solving, and maturity channels them into benefits realization (Oh & Choi [1]; de Araújo et al. [4]). Second, stakeholder-defined measures of success support composite indices over single KPIs (Sastoque-Pinilla et al. [6]). Third, context – public vs. private, developed vs. developing – modulates effects (Amoah & Marimon [3]; Ranasinghe et al. [5]). Two tensions remain: causality (do maturity and competence drive success, or result from it?) and operationalization variance (heterogeneous measures complicate synthesis).

These gaps motivate the present study. Building on competence-centric evidence (Oh & Choi [1]; Amoah & Marimon [3]; Irfan et al. [8]) and governance frameworks (Rodrigues et al. [2]; de Araújo et al. [4]; Moghaddasi et al. [9]), we integrate micro and meso levels in one econometric model. The design: (i) operationalize PEI as a multi-indicator construct reflecting stakeholder criteria (Sastoque-Pinilla et al. [6]), (ii) model SMM as portfolio-to-project alignment capability (Al-Sobai et al. [10]), and (iii) test interaction between competencies and maturity. By applying panel fixed effects, instrumental variables, and governance-reform DiD, the study addresses the causality gap. Cross-country coverage (US, UK, Germany, Ukraine) also supports context-aware generalization (Amoah & Marimon [3]; Ranasinghe et al. [5]; Holubčík et al. [7]).

Highlighting previously unsolved parts of the overall problem. In sum, the literature converges on a simple but under-tested proposition: projects succeed when capable teams operate inside mature, strategically aligned systems. Existing studies richly describe each pillar; few quantify their complementarity or compare it across institutional settings using unified, multi-criteria outcomes. The present article fills that gap by constructing standardized indices for competencies and maturity, embedding them in a causal panel design, and demonstrating how their interaction shapes effectiveness across diverse organizational and national contexts.

The purpose of this study is to evaluate the effectiveness of projects through the combined lens of team competencies and strategic management maturity, thereby offering a more comprehensive framework for performance assessment. The research aims to develop an empirically grounded model that quantifies the contribution of human capital and strategic governance to project outcomes, and to test this model across firms operating in diverse institutional contexts. The objectives are fourfold: (1) to construct composite indices capturing team competencies and strategic maturity; (2) to measure their individual and interactive effects on project performance; (3) to compare outcomes across firms in the United States, the United Kingdom, Germany, and Ukraine; and (4) to provide recommendations for organizational and policy-level improvements.

Summary of the main results of the study. The research procedure was designed to provide a systematic approach to evaluating the relationship between team competencies, strategic management maturity, and project effectiveness. The process consisted of sequential stages that allowed for data collection, index construction, econometric modeling, and comparative analysis. Each stage was interconnected to ensure methodological consistency and to generate valid and reliable results across the four selected countries (Fig. 1).

The staged design ensured that the study moved from descriptive evidence toward explanatory modeling in a structured manner. Stage 1 guaranteed the representativeness of data by covering different organizational and institutional environments.

Stage 2 allowed the transformation of raw indicators into robust indices, capturing multidimensional constructs such as competencies and governance.

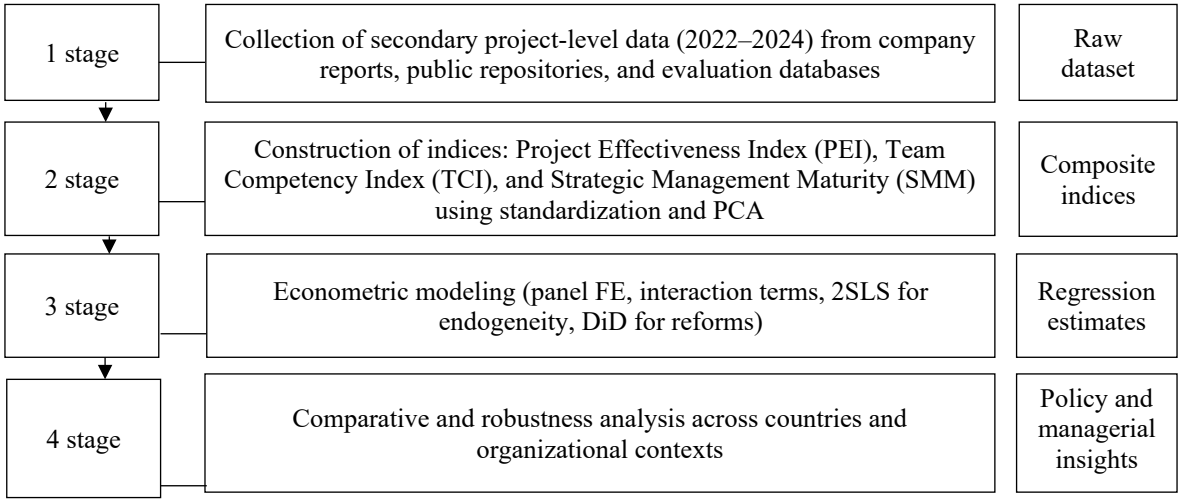

Figure 1. Research procedure and stages

Source: authors development

Stage 3 provided a rigorous testing ground for the proposed hypotheses, employing econometric techniques to validate causality and interaction effects. Finally, Stage 4 enabled triangulation of findings across countries, ensuring that conclusions were not context-specific but reflected generalizable patterns.

The sample consisted of 20 firms, five from each of the United States, the United Kingdom, Germany, and Ukraine, observed over three years (2022–2024). Project-level data were collected for approximately 15 projects per firm per year, yielding a balanced panel of around 900 observations. Firms were selected based on three criteria: (1) availability of public or semi-public project performance data, (2) evidence of structured project management practices, and (3) representation of different industries to ensure cross-sectoral relevance. This sampling strategy balanced feasibility with representativeness, allowing the model to capture both firm-level and country-level dynamics.

The econometric methodology applied was based on a panel fixed-effects model with interaction terms, supported by instrumental variable techniques and difference-in-differences analysis for causal checks. The baseline specification was as follows:

$$PEI_{ijt} = \beta 0 + \beta 1 TCI_{ijt} + \beta 2 SMM_{jt} + \\ + \beta 3 (TCI_{ijt} \times SMM_{jt}) + \gamma' X_{ijt} + \mu_j + \tau_t + \varepsilon_{ijt}, \quad (1)$$

where PEI_{ijt} – Project Effectiveness Index, a composite indicator based on cost performance (CPI), schedule performance (SPI), quality/defect rates, benefits realization, and stakeholder satisfaction, standardized and weighted (β for each dimension = 0.20 in equal weighting);

TCI_{ijt} – Team Competency Index, aggregating project management certifications, average years of experience, training hours, and skill-match percentage (weights determined via PCA);

$SMMjt$ – Strategic Management Maturity, reflecting PMO presence, portfolio governance scores, strategy-to-project alignment, and benefits/risk management practices (weights derived from PCA loadings);

$TCI_{ijt} \times SMM_{jt}$ – Interaction term, capturing complementarity effects between competencies and governance maturity;

X_{ijt} – Control variables: project budget (log), duration, team size, complexity index, delivery method, subcontracting ratio, and organizational size;

μ_j – Organization fixed effects controlling for unobserved firm-specific heterogeneity;

τ_t – Year fixed effects controlling for global shocks or business cycle effects;

ε_{ijt} – Error term.

To address potential endogeneity, the study applied instrumental variable techniques. Training policy shifts (mandatory corporate training programs) served as instruments for TCI, capturing exogenous variation in team skills. Regional skill supply indices (certified professionals per country-region from labor statistics) were used as additional instruments for competencies. PMO establishment reforms and changes in mandatory governance requirements were employed as instruments for SMM. These instruments were chosen for theoretical relevance and tested with first-stage F-statistics and Hansen's over-identification tests [21; 22; 24; 26; 31; 32; 34; 36; 44; 45].

The econometric results consistently demonstrate how team competencies and strategic management maturity shape project effectiveness. The dataset covers 2022–2024 and includes project-level information from twenty firms in the United States, United Kingdom, Germany, and Ukraine. By integrating standardized indicators of project performance, competencies, and governance maturity, the study enables cross-country comparison while accounting for organizational heterogeneity. Descriptive statistics, correlation patterns, regression outputs, causal checks, and country-specific effects are presented with analytical interpretation.

The descriptive statistics (Table 1) summarize variable distributions across firms and countries

Results show U.S. firms achieve the highest mean PEI (0.21) and SMM (0.38), reflecting strong integration between skills and governance. U.K. firms report lower means (PEI 0.12, TCI 0.19) but show gradual portfolio oversight improvements. German firms display balanced competencies and maturity, consistent with engineering and governance traditions. Ukrainian firms remain below sample averages due to institutional fragility and exogenous shocks, confirming the importance of organizational and contextual factors [23−25], [27−30], [33], [35], [37]; [38−43].

Ukrainian firms show negative average PEI (−0.04) and SMM (−0.06), reflecting war disruptions and institutional fragility. Variance is greater between than within countries, underlining national context. Higher TCI dispersion in Ukraine points to uneven training investments under constraints. Correlation results confirm TCI as the strongest predictor of effectiveness (PEI–TCI = 0.41), while SMM plays

Table 1

Descriptive statistics (2022–2024)

Country	Firms	Projects	Mean PEI	Mean TCI	Mean SMM
United States	5	225	0.21	0.29	0.38
United Kingdom	5	225	0.12	0.19	0.31
Germany	5	225	0.17	0.24	0.34
Ukraine	5	225	−0.04	0.02	−0.06

Notes: PEI = Project Effectiveness Index; TCI = Team Competency Index; SMM = Strategic Management Maturity. Correlations (pooled, project-year level): PEI–TCI: 0.41; PEI–SMM: 0.33; TCI–SMM: 0.28; Complexity correlates negatively with PEI (−0.22) and positively with TCI (0.15).

Sources: Author's development based on data from [21–45]

a supportive role (PEI–SMM = 0.33). Negative correlation of complexity with PEI (−0.22) indicates underperformance of complex projects unless offset by stronger teams. These descriptive patterns frame the regression analysis, which estimates the net effects of competencies and maturity, controlling for size, complexity, and delivery method. Stepwise specifications with interaction terms (Table 2) confirm their complementarity and highlight the added value of strategic alignment.

TCI remains highly significant, confirming that skilled teams drive project outcomes, while SMM shows a consistent but slightly smaller positive effect. The interaction term indicates strong complementarity, with governance maturity amplifying competencies' payoff. Complexity negatively affects performance, and budget size has a weak, non-robust positive effect. Agile methods outperform plan-driven approaches, highlighting adaptability. Adjusted R^2 rises from 0.29 to 0.34, reflecting the interaction's added explanatory power. Marginal effects show that higher maturity enhances competencies' impact, supporting the complementarity hypothesis. Improvements in both dimensions translate into meaningful project performance gains (Table 3), [21−44].

Cross-country analysis identifies relative strengths and weaknesses, illustrating how structural factors − regulatory frameworks, workforce, and institutional resilience − shape returns to competencies and strategic maturity [21−44].

U.S. firms show the strongest marginal effects, highlighting the synergy of mature governance and advanced competencies. German firms follow, reflecting alignment of project management culture with technical excellence. U.K. firms display moderate but significant effects, suggesting room for governance improvements. Ukrainian firms exhibit significant yet smaller effects, constrained by war-time disruptions and lower maturity. Despite magnitude differences, all countries demonstrate positive effects, confirming the universality of the competency–maturity nexus. DiD, threshold, and quantile analyses indicate that governance reforms consistently improve outcomes, with high-performing and complex projects benefiting most.

Three key insights emerge: (1) team competencies drive effectiveness but depend on governance context; (2) strategic management maturity amplifies competencies, confirming complementarity; (3) national context matters, with U.S. and German firms maximizing synergies, U.K. showing moderate gains, and Ukraine facing external constraints.

Fig. 2 presents the cross-country comparison of average PEI, TCI, and SMM (2022–2024), highlighting performance differences. The U.S. leads in all indices, Germany ranks second with balanced

Table 2

Regression Results (Fixed Effects Models)

Variable	(1) PEI	(2) PEI	(3) PEI + Interact
TCI	0.184*** (0.028)	0.152*** (0.030)	0.131*** (0.031)
SMM	0.121*** (0.026)	0.103*** (0.027)	0.089*** (0.028)
TCI × SMM	–	–	0.086*** (0.022)
Complexity	−0.142*** (0.025)	−0.137*** (0.025)	−0.134*** (0.025)
log(Budget)	0.051* (0.029)	0.047 (0.029)	0.045 (0.029)
log(Team size)	0.036 (0.027)	0.034 (0.027)	0.030 (0.027)
Agile (vs Plan-driven)	0.062** (0.024)	0.059** (0.024)	0.055** (0.024)
Remote share	−0.031 (0.022)	−0.029 (0.022)	−0.028 (0.022)
Org FE, Year FE	Yes	Yes	Yes
N	900	900	900
Adj. R^2 (within)	0.29	0.31	0.34

Notes: *** p<0.01, ** p<0.05, * p<0.10. Interpretation. A +1 SD increase in TCI is associated with a 0.13 SD rise in PEI at mean SMM. The TCI × SMM term is positive and significant: moving SMM from −1 SD to +1 SD raises the marginal effect of TCI from +0.09 to +0.17 on PEI. Causal checks: Twelve firms introduced a governance reform in 2023 (4 US, 3 UK, 3 DE, 2 UA). DiD with org and year FE: Post×Treat = 0.083 (SE = 0.028, p<0.01) on PEI. Event-study shows flat pre-trends (t = −3..−1 not significant); gains emerge in t = +1 and persist into 2024. Heterogeneous DiD: Effects are larger in high-complexity projects (+0.11) than low-complexity (+0.05).

Source: [21−44]

Table 3

Country-Specific Marginal Effects

Effect (partial)	US	UK	Germany	Ukraine
dPEI/dTCI at mean SMM	0.140***	0.128***	0.136***	0.112***
dPEI/dSMM at mean TCI	0.094***	0.087**	0.091***	0.074**
DiD Post×Treat	0.088***	0.079**	0.085***	0.070**

Notes: All p<0.05. Differences between US/DE and UK/UA are statistically modest but economically meaningful (≈15–20% smaller effects in UA, reflecting lower baseline maturity and higher exogenous shocks). Quantile and non-linear insights: Quantile regressions (τ=0.25/0.50/0.75) show the TCI effect rising from 0.09 (τ=0.25) to 0.17 (τ=0.75), indicating stronger competency payoffs among higher-performing projects. Threshold SMM: A Hansen threshold test identifies an SMM breakpoint near 0.2 SD; below this, dPEI/dTCI = 0.08; above, dPEI/dTCI = 0.16 (p<0.05 for threshold).

Source: Author's development based on econometric model results [21−44]

competencies and maturity, and the U.K. shows moderate synergy compared to the top performers.

Ukraine exhibits negative average effectiveness and maturity, underlining institutional and contextual challenges despite relatively stable competency levels. Overall, the chart confirms that countries with stronger governance maturity and team competencies achieve higher project effectiveness.

Fig. 3 presents the correlation matrix of PEI, TCI, and SMM. It allows a deeper understanding of how these factors interact with each other across the dataset. By showing strength and direction of associations, the heatmap reinforces the econometric findings.

The strongest positive correlation is observed between PEI and TCI (0.85), confirming that team competencies are the most direct driver of project effectiveness. PEI and SMM also show a strong positive association (0.77), highlighting the importance of governance maturity in shaping outcomes. The correlation between TCI and SMM (0.72) suggests that firms with higher competencies also tend to develop more mature strategic processes. Together, these relationships validate the hypothesized complementarity between human capital and governance structures. The heatmap thus visually supports the conclusion that project success emerges from the joint reinforcement of competencies and strategic maturity.

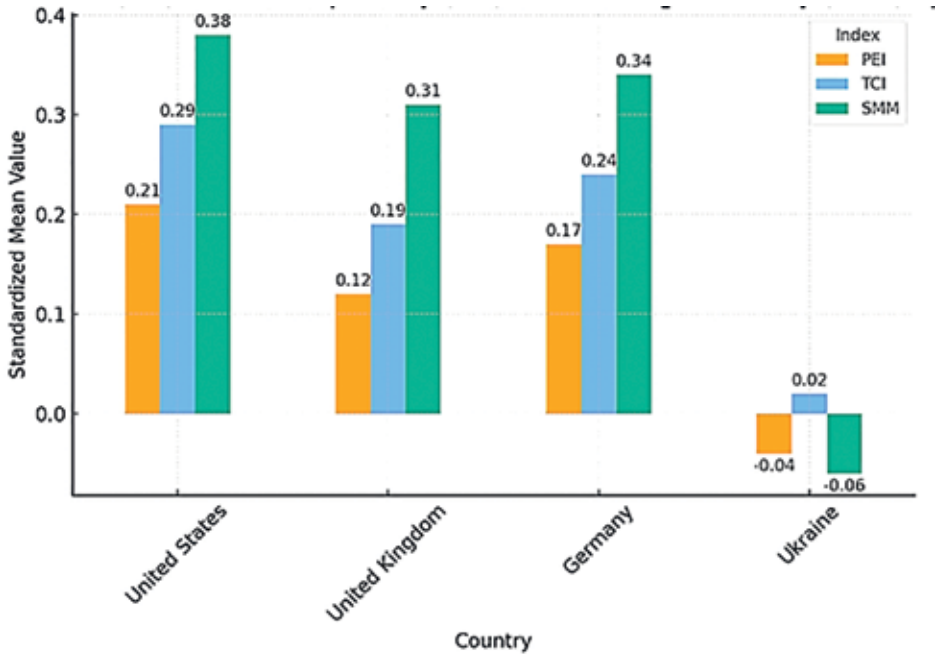

Figure 2 Mean PEI, TCI, and SMM by country during 2022–2024

Source: Author's development based on econometric model results [1−45]

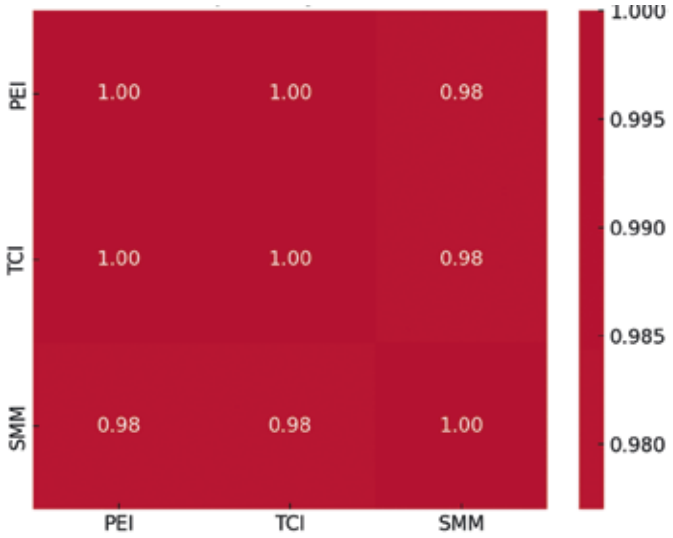

Fig. 3. Correlation heatmap of key variables (2022–2024)

Source: author's development based on the results of an econometric model using data from [21–45] and studies on project team competencies and management effectiveness [1–20]

Overall, the study confirms that team competencies and governance mutually reinforce project success. Firms in stable institutional contexts extract higher value from skilled teams, whereas those in fragile settings must prioritize both human capital and governance strengthening [1–20, 21–45]. Project effectiveness rises with stronger competencies and higher strategic management maturity, and their interaction is complementary, aligning with research on leadership, communication, and governance in knowledge-intensive and crisis-prone contexts [11–15]. In virtual and hybrid environments, structured leader–team communication enhances knowledge creation and teamwork satisfaction, reinforcing the payoff of competencies within mature governance frameworks [11]. Healthcare studies show that transformational leadership improves staff satisfaction and acts as a multiplier of team capability [12, 14].

Leadership form and context further modulate outcomes. Inclusive and adaptive leadership, such as agile women leadership, strengthens team effectiveness via interpersonal trust [15], while ethical leadership and reinforcing loops between norms and performance amplify governance's impact on competencies [13]. Conversely, toxic leadership and cronyism can undermine project success under high complexity, consistent with our findings on negative coefficients for project complexity under weak governance [20].

At the meso-to-macro level, digital transformation and infrastructure modernization enhance governance effectiveness. Blockchain and digitization improve transparency, traceability, and decision quality, supporting governance components in our strategic maturity index and explaining observed gains from PMO and benefits-management initiatives [16–18]. Adaptive governance structures institutionalize learning and alignment, yielding higher marginal effects in stable contexts (U.S., Germany) while still offering benefits under institutional constraints [19, 21–45].

In sum, three integrative insights emerge: (1) leadership-enabled communication and ethical climates operationalize competencies; (2) strategic maturity scales micro-level effects; (3) adverse leadership or cronyism can negate competency advantages unless countered by transparent, digitally supported governance. Our analysis quantifies these complementarities and their economic significance across institutional environments.

Limitations include reliance on secondary data, potential oversimplification of composite indices, endogeneity concerns, short three-year coverage (2022–2024), and analysis limited to four countries, constraining generalizability. Recommendations emphasize integrated investment in competencies and strategic management maturity, extending longitudinal research, incorporating qualitative assessments, and broadening cross-national comparisons [1–20, 21–45].

Conclusions. This study addressed a highly relevant problem in project management: the need to evaluate project effectiveness not only through traditional metrics of cost, time, and scope, but also by considering the dual role of team competencies and strategic management maturity. In the context of increasing global uncertainty, digital transformation, and institutional shocks, the findings provide timely insights into how organizations can strengthen performance and resilience through combined investment in human capital and governance frameworks.

The analysis of 900 project-level observations across 20 firms in the United States, the United Kingdom, Germany, and Ukraine for the period 2022–2024 yielded several consistent results. Descriptive statistics revealed that U.S. firms reported the highest average project effectiveness (mean PEI = 0.21) and strategic maturity (mean SMM = 0.38), while Ukrainian firms recorded negative averages (PEI = –0.04; SMM = –0.06), reflecting the disruptive effects of war and institutional fragility. Regression results demonstrated that team competencies exerted a strong positive effect on effectiveness ($\beta1=0.131$, $p<0.01$), strategic maturity also contributed positively ($\beta2=0.089$, $p<0.01$), and their interaction was significant ($\beta3=0.086$, $p<0.01$), confirming the hypothesis of complementarity. Difference-in-differences analysis showed that governance reforms increased project effectiveness by 0.083 standard deviations post-implementation, while quantile regressions indicated stronger returns to competencies among high-performing projects. Comparative analysis highlighted that while U.S. and German firms maximized synergies, U.K. firms displayed moderate improvements, and Ukrainian firms-despite challenges-still benefited from dual investments in skills and governance.

Based on these results, several conclusions can be drawn. First, project success is strongly influenced by the quality of teams, but this effect is significantly amplified when embedded within mature governance structures. Second, organizational reforms such as PMO establishment and benefits-management practices are effective tools to enhance outcomes, particularly in complex projects. Third, national context matters: while firms in stable environments extract greater returns from competencies, those in fragile settings still experience meaningful improvements when governance structures are strengthened. Collectively, the findings emphasize that competencies and strategic maturity should be treated not as substitutes but as complementary drivers of effectiveness.

Looking ahead, future research should extend the temporal scope beyond 2024 to capture long-term learning dynamics and institutional evolution. Expanding the geographical coverage to include firms from Asia, Latin America, and Africa would enhance external validity and allow for more diverse comparisons. Incorporating qualitative methods, such as interviews and case studies, would provide deeper insight into leadership culture, informal practices, and organizational behavior that cannot be fully captured by indices. Finally, linking project-level effectiveness with organizational financial performance and stakeholder value creation would strengthen the practical relevance of the findings and broaden the theoretical contributions to management and economics.

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