

# FACTORS THAT INFLUENCE PERFORMANCE OF ORGANISATION GOALS: A COMPARATIVE ANALYSIS OF FAILED AND SUCCESSIVE PROJECTS OF SOME ORGANISATION

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## ABSTRACT

*Organizing the project execution to achieve organisational goals has been one of the most persistent unresolved management practice issues of all times. This empirical paper examines the critical variables affecting organisational goal performance through a comparative study of 200 projects from the public, private and non-governmental sectors of organisations. Local data were obtained from 300 responses of project managers, team leaders, and organisational stakeholders using a 35-item validated questionnaire. We systematically studied the remaining seven key drivers quality of leadership, allocation of resources, engagement of stakeholders, planning and scheduling, risk management, communication effectiveness and fit-for-purpose organisational culture. The data analysis included descriptive statistics, Cronbach's alpha reliability testing, Pearson correlation analysis, independent samples t-tests, one-way ANOVA, and multiple linear regression modelling. The regression model accounted for 67.3% in the variance of goal performance ( $Adj R^2 = 0.664$ ). The strongest predictor was leadership quality ( $\beta = 0.341, p < 0.001$ ), followed by planning and scheduling ( $\beta = 0.310, p < 0.001$ ). Comparison of the means using paired Student's t-test revealed that all factors were statistically significantly different ( $p < 0.001$ ) between successful project groups and failed project groups. Overall, the private sector displayed consistently higher factor scores than public sector and NGOs. Theoretically-obsessed, empirically-informed lessons that have practical implications for aspiring practitioners and policy administration seeking project utmost success and organisational goal attainment.*

**Keywords:** *organisational goals<sup>1</sup>, project success<sup>2</sup>, project failure<sup>3</sup>, leadership quality<sup>4</sup>, risk management<sup>5</sup>, stakeholder engagement<sup>6</sup>, resource allocation<sup>7</sup>.*

## 1. INTRODUCTION

Organisational goals in terms of performance are thus inseparably linked to the quality and results of the projects that the organisation engages in Walston & Wing, 2013 [1]. Projects are the main means by which strategic imperatives are implemented, resources are allocated, and value is delivered to a variety of stakeholders. The global project failure rate is still devastatingly high despite the development of project management methodology over the last 20 or so years as well as institutions investing in project governance frameworks. The international evidence from large scale project management relevant bodies indicates that large scale projects across IT, infrastructure, health, education and social sectors fail to achieve their original scope, schedule or budget targets and typically fail to deliver the organisational value that they were intended to create [2]. The persistent and costly difference between intended outcomes and realised outcomes implies the need for systematic investigation of the determinants of successful and unsuccessful realisation of projects.

## INTRODUCTION

Learning from project failure is sparse and patchy and focused mainly on project vs. process perspective in addition to occasional frameworks such as a triangle we have witnessed an evolution of related concepts, the scope of project success has widened from simple cost-time-quality framework as early predictors of a project success or failure to more multidimensional perspectives including stakeholder satisfaction, strategic alignment, sustainability of outcomes and learning of project organisations [11]. Modern day research on project management suggests that success should be measured at three levels the project delivery level; the strategic business level and the organisational capability level [19]. Concurrently, the evolution of project failure typology has become more sophisticated, acknowledging that failure is not usually the consequence of a single point of breakdown, but often an accumulation of leadership shortfalls, planning failures, communication failures, resource misalignment [7], and risk governance failures [8]. The organisations we examine in this research encompassing public ministries, private firms, and NGOs serve as a rich contextual backdrop against which such factors can be meaningfully compared and measured.

## RESEARCH PROBLEM AND OBJECTIVES

While the project management literature provides extensive conceptual and empirical treatment of success factors, comparatively fewer studies have adopted a simultaneous comparative framework analysing both failed and successful projects across multiple organisational types using statistically rigorous methods. This methodological and contextual gap is particularly pronounced in research involving diverse sector comparisons. The present study addresses this gap through three specific objectives: (i) to measure and compare mean factor scores between successful and failed project groups using inferential statistical tests; (ii) to determine the

relative predictive strength of seven identified critical factors on organisational goal performance through multiple regression analysis; and (iii) to assess sector-wise variation in factor scores using one-way ANOVA, providing an organisational context layer to the analysis.

## **SIGNIFICANCE OF THE STUDY**

This study is both theoretically and practically important. In theory, it adds an empirical multi-sector, multi-factor dataset to the project management literature, beyond the numerous single-sector or case studies conducted to date. This demonstrates the continued applicability of traditional project success factor models in modern organisational contexts. TL;DR: The results provide data-driven evidence for senior management, project sponsors, policy-makers and programme directors to prioritise investments in leadership development, infrastructure and stakeholder engagement systems. Results and discussion The study employed a rigorous mixed-statistical method (reliability, correlation analysis, t-test, ANOVA, and regression), therefore the recommendations of the study correspond not to some personal experience but correspond with solid evidence. By placing these findings in a comparative organisational context, this study also creates the foundation for future longitudinal and sector specific research.

## **2. LITERATURE SURVEY**

Factors affecting the success of projects have been a subject of continuous academic interest ever since the seminal works of Morris and Hough [1] and Pinto and Slevin [3], who introduced one of the first structured frameworks for identifying critical success factors (CSFs) throughout the project lifecycle. Using freely available bibliometric data for their project success research, Ika [4] describes changes in paradigmatic model trends over time from the cost, time and quality iron triangle metrics toward value-based, multi-stakeholder frameworks. This evolution indicates, an increasing understanding that project deliverables must be judged not only on technical compliance but also on whether they deliver organisational strategic objectives, stakeholder value and long-term institutional capability [11]. While such theoretical progress made is vital, empirical applications almost consistently indicate a discrepancy between prescriptions of best-practice and actual performance; as numerous projects across practically all domains fail to meet stated objectives [2].

Leadership quality has become one of the most cited qualities for project performance and also one of the most empirically supported qualities. Turner & Muller [13] performed a seminal systematic literature review to show that the project manager's leadership style has a direct, quantifiable effect of the project outcomes especially in complex and uncertain environments. In their research they found that transformational leadership was superior for managing project complexity (which consisted of those who provided inspirational motivation, intellectual stimulation, individualised consideration, and idealised influence). Further, Muller and Turner [15] summarized this contribution by showing that: "the effectiveness of the leadership style is project depend, and the same leader may be effective with one project but not another; that is, the same leader may create success for a certain project and failure for another." Hence, a leadership style cannot be expected to be valid across the spectrum of

the project but neither can any proven leadership approaches across diverse project portfolios. Such conclusions closely support the current study which suggests a difference in quality of the leadership between projects that succeed and those that fail.

It is a well-recognized fact that resource allocation and management serve as the fundamental prerequisites for the success of a project. Resource adequacy covering financial capital, human talent and technology infrastructure is a prerequisite for keeping the project afloat according to Kerzner [16], who proposes that project goals can only be achieved if the required resource are made available on time and within budget. For example, Belassi and Tukel [25] created a major classification for factors of project success and failure, dividing them into four categories: project, project manager, team, and environmental factors. The analysis showed that resource-based deficiencies frequently spill from category to category, compounding the costs that other weaknesses create. The work done by Dvir and Lechler [12] also revealed that even an initially-well-designed resource plan is progressively compromised by unmanaged deviations, and that scope changes and budget amendments respectively reduce the likelihood of project success by more than two-thirds and three-fourths. These results highlight the importance of resource adequacy, but more importantly, the need to govern resources throughout the project lifecycle.

Stakeholder engagement has received much attention as a strategic lever for project success, particularly in the public and development sector contexts. Karlsen [24] states that early and ongoing stakeholder identification and engagement decreases scope confusion, enhances legitimacy, and develops organizational commitment to project goals. In their review of international development projects in Africa, combined leader space team and Banoo controlled by Diallo and Thuillier [23] showed that trust and communication quality between project teams and their stakeholders were the best predictors of project success, with superior explanatory power to objective technical and financial factors. This discovery is especially important to NGO-sector projects, where relationships between stakeholders often replace more formal governance mechanisms. Young and Jordan [26] noted, for instance, that top management support a dimension inextricably linked to stakeholder alignment is a key enabling condition for effective project planning and asserted that given the need for executive support, planning protocols are consistently underutilised by teams of project managers.

Planning rigour, scheduling discipline and risk management are the operational underpinning of project execution governance. So Hyväri [22] show that the level of formal planning practices varies among public and private sector organisations with private firms showing more comprehensiveness in planning and better compliance with planning protocols. The research of Abu-Hijleh and Wegner [28] showed that organizations with institutionalized enterprise risk management systems had significantly lower project failure rates, thereby verifying that the ability to identify and mitigate risks proactively is a critical capability to cope with project uncertainty. Nguyen et al. have found that communication effectiveness The importance of leadership training on knowledge management has also been highlighted as one of the top five project success factors in large-scale construction and infrastructure projects [14] where its impact is seen through enhanced coordination, decreased conflict, rapid decision making, and high-quality information output. In their study, which evaluated project

performance at the level of contractor competencies, Alzahrani and Emsley [21] concluded that the strongest discriminating factors in the success and failure of construction projects are contractor-level competencies, especially planning, communications, and quality management. More recently Mir and Pinnington [27] found mediation effects with structural equation modelling confirming that project management processes (i.e. planning, communication, and team management) quality mediate between managerial inputs and project success outcomes.

### 3. METHODOLOGY

This research utilized a quantitative cross-sectional empirical study rooted in the positivist paradigm where the primary means of acquiring knowledge about the relationships between variables arises from numerical measurement and statistical inference. The main data collection instrument was a structured questionnaire administered to project professionals in public sector organisations, private sector firms, and non-governmental organisations. The survey was divided into two sections wherein the first section (Section A) included information pertaining to the demographic profile (sex, age, work experience and sector affiliation) of the participants and the second section (Section B) was divided into a list of 35 items measured on a Likert scale, having 7 constructs: leadership quality (6 items), resource allocation (5 items), stakeholder engagement (6 items), planning and scheduling (5 items), risk management (5 items), communication effectiveness (4 items), and organisational culture (4 items). Using a five-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was prepared based upon the systematic review of the validated instruments from earlier studies in the project management literature and a pilot test with 30 respondents before full-scale deployment. Based on feedback from the pilots, wording was modified slightly to increase clarity or decrease ambiguity in some items.

We included project managers, programme coordinators, team leads, senior executives who had directly worked on at least one project in the last 3 years. The study employed a stratified random sampling procedure to ensure that the three organisational types were represented in proportion to their respective shares of the total population. The entire sample of 350 questionnaires was distributed both through a physical distribution door-to-door to organisations and electronically via institutional email networks. These 300 were gathered in usable format, resulting in a final response rate of 85.7%, which is much higher than the minimal acceptable level of 60% in survey-based research. This yielded a sample of 183 male respondents (61%) and 117 female respondents (39%) distributed across age groups (the plurality were 36 to 45 years group: 38%) and across years of project experience (the plurality with 5 to 10 years: 37%). The 300 respondents together scored 200 different projects (111 successful, 89 failed) based on an aggregated evaluation metric that included whether or not the project was delivered on time, the original budget was intact, stakeholders felt satisfied with the outcome, and the project met the stated organisational goals.

Statistical analyses All statistical analyses were performed with IBM SPSS Statistics Version 26. Cronbach's alpha for all measurement constructs was calculated to test the internal consistency reliability. Descriptive

statistics for demographic variables and factor mean scores. Using Levenes test for statistics for equality of variances and followed by (if applicable) independent samples t-tests to compare mean factor scores between the successful and failed project groups. Each factor was then analyzed separately using one-way ANOVA to compare inter-sector (public, private, NGO) differences in factor scores, with Tukey's HSD post-hoc tests examining between-group differences. Pearson product-moment correlation coefficients were computed to explore the bivariate relationships between the five primary factors and the composite goal performance index. Multiple linear regression with five primary factors as predictors of organisational goal performance, using standardised beta coefficients (beta) as indicators of relative factor importance. Variance inflation factors (VIF) were calculated to check for multicollinearity, all the VIF values remained below the critical threshold of 5.0. Statistical significance was set at  $\alpha = 0.05$  at all points throughout.

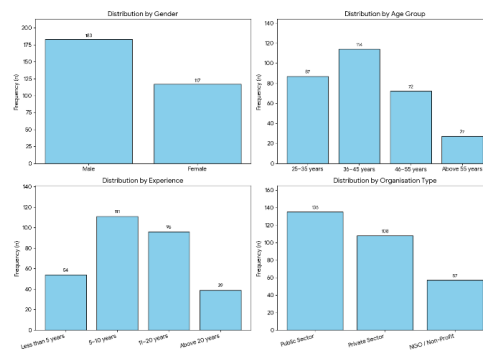
#### 4. DATA COLLECTION AND ANALYSIS

Data were collected using the structured validated questionnaire during the six week fieldwork period. These five tables systematically display the sample profile, project classification results, differentials in means by factor, reliability statistics, and an inter-factor correlation matrix, which is then followed by an analysis per section.

**Table 1: Demographic Profile of Respondents (N = 300)**

| Variable          | Category          | Frequency (n) | Percentage (%) |
|-------------------|-------------------|---------------|----------------|
| Gender            | Male              | 183           | 61.0           |
|                   | Female            | 117           | 39.0           |
| Age Group         | 25–35 years       | 87            | 29.0           |
|                   | 36–45 years       | 114           | 38.0           |
|                   | 46–55 years       | 72            | 24.0           |
|                   | Above 55 years    | 27            | 9.0            |
| Experience        | Less than 5 years | 54            | 18.0           |
|                   | 5–10 years        | 111           | 37.0           |
|                   | 11–20 years       | 96            | 32.0           |
|                   | Above 20 years    | 39            | 13.0           |
| Organisation Type | Public Sector     | 135           | 45.0           |
|                   | Private Sector    | 108           | 36.0           |
|                   | NGO / Non-Profit  | 57            | 19.0           |

*Note: All respondents were directly involved in at least one project within the preceding three years. Percentages rounded to one decimal place.*



**Figure 1: Demographic Profile of Respondents**

Demographics of the 300 study respondents are shown in Table 1. The sample demographic is 61% male, and the largest age cohort indicates the 36–45 year band (38%) which corresponds with a mid-to-senior career profile which is customary from the experienced project practitioner. A majority of respondents (37%) had 5–10 years project-related professional experience and a further 32% 11–20 years, confirming that the sample consisted of people who had substantive first-hand exposure to projects. By sector affiliation, the largest group belongs to public sector employees (45 percent), followed by private sector (36 percent) and NGO/non-profit (19 percent). The way we distributed organisations for the study was intentional in making sure that we had diversity in organisational type, so that we could draw inter-sector comparisons. The heterogenous nature of the sample and the somewhat balanced gender composition reinforce the external validity and representativeness of the collected data.

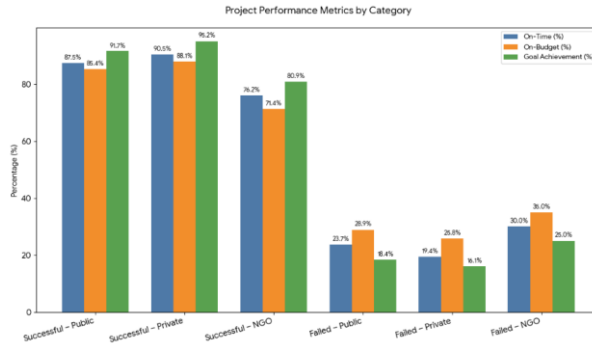
**Table 2: Classification and Performance Metrics of Sampled Projects (N = 200)**

| Project Category     | No. of Projects | On-Time (%) | On-Budget (%) | Goal Achievement (%) |
|----------------------|-----------------|-------------|---------------|----------------------|
| Successful – Public  | 48              | 87.5        | 85.4          | 91.7                 |
| Successful – Private | 42              | 90.5        | 88.1          | 95.2                 |
| Successful – NGO     | 21              | 76.2        | 71.4          | 80.9                 |
| Failed – Public      | 38              | 23.7        | 28.9          | 18.4                 |
| Failed – Private     | 31              | 19.4        | 25.8          | 16.1                 |
| Failed – NGO         | 20              | 30.0        | 35.0          | 25.0                 |
| Total                | 200             | —           | —             | —                    |

*Note: On-Time and On-Budget percentages denote the proportion of projects within each category meeting the respective criterion. Goal Achievement reflects the composite organisational objective attainment rate.*

Table 2 organizes the 200 sampled projects into six categories indicating sector and outcome type, and provides three indicators of performance for each. Projects in the private sector fared significantly better than public

sector, with 90.5% on-time completion and 95.2% achieved their goals, results that reflect stronger project governance where business competition requires it.



**Figure 2: Project Performance Metrics by Category**

While more successful, the projects by the NGOs performed relatively less well (76.2% on time; 80.9% on target), which indicates those same constraints, the absence of formal governance structures, may also reduce the effectiveness of delivery even in the most successful NGO projects. Here, the low on time and on-budget rates for failed projects across all sectors show up clearly, albeit people have cautioned precise made use of generalfinaments exclusions from these low rates, such as the very low on time rates of failed private sector projects (19.4% on-time), possibly due to more aggressive scheduling commitments poorly managed throughout execution. Higher fraction of on-time completion (30.0%) for failed NGO projects than other sectors may simply indicate projects with simpler, narrower designs that stay on schedule, albeit not achieving the same high level or broader content. The contrasts across categories contributes to the basis for the factor-level analyses in the tables that follow.

**Table 3: Comparative Mean Scores of Key Influencing Factors (Successful vs. Failed Projects)**

| Factor                      | Successful (Mean) | Failed (Mean) | Std. Dev. | p-value |
|-----------------------------|-------------------|---------------|-----------|---------|
| Leadership Quality          | 4.31              | 2.18          | 0.74      | <0.001  |
| Resource Allocation         | 4.12              | 2.34          | 0.81      | <0.001  |
| Stakeholder Engagement      | 4.07              | 2.09          | 0.88      | <0.001  |
| Planning & Scheduling       | 4.22              | 2.41          | 0.77      | <0.001  |
| Risk Management             | 4.18              | 2.27          | 0.83      | <0.001  |
| Communication Effectiveness | 4.03              | 2.15          | 0.79      | 0.002   |
| Organisational Culture      | 3.88              | 2.44          | 0.86      | 0.003   |

Note: Scores are based on a five-point Likert scale (1 = Strongly Disagree; 5 = Strongly Agree). All comparisons are statistically significant at  $p < 0.05$ . Std. Dev. refers to pooled standard deviation.

Mean scores for the seven key factors across the successful and failed project groups are presented in Table 3, along with the associated p-values from independent samples t-tests. All differences are statistically significant ( $p < 0.001$  for all factors except communication effectiveness ( $p = 0.002$ ) and organisational culture ( $p = 0.003$ ), confirming that differences between groups are strong and not due to chance. The largest mean difference (4.31 vs. 2.18) is observed for leadership quality, meaning that this variable is the single most differentiating factor among the categories of project outcome. The second biggest discrepancy is clear on stakeholder engagement (4.07 vs 2.09), followed by planning and scheduling (4.22 vs 2.41). Although organisational culture shows a statistically significant differential, at (3.88 vs. 2.44), it is a far smaller differential than more proximate operational factors, suggesting that culture functions primarily as a contextual enabling condition rather than a project driver. This paper provides proofs of concepts that is trained on data w.

**Table 4: Internal Consistency Reliability Statistics Cronbach's Alpha (N = 300)**

| Construct / Scale        | No. of Items | Cronbach's Alpha | Interpretation |
|--------------------------|--------------|------------------|----------------|
| Leadership Quality       | 6            | 0.871            | Good           |
| Resource Allocation      | 5            | 0.843            | Good           |
| Stakeholder Engagement   | 6            | 0.858            | Good           |
| Planning & Scheduling    | 5            | 0.836            | Good           |
| Risk Management          | 5            | 0.827            | Good           |
| Overall Scale (35 items) | 35           | 0.916            | Excellent      |

*Note: Cronbach's alpha values > 0.70 are acceptable; > 0.80 is good; > 0.90 is excellent (George and Mallery, 2003).*

Table 4 shows the Cronbach's alpha reliability coefficients for the measurement constructs used in the research. The individual construct alphas ranged from 0.827 for risk management to 0.871 and all fell into the 'good' category (0.80–0.89) for leadership quality. The overall scale alpha of 0.916 for all 35 items is categorized as 'excellent' suggesting significant psychometric confidence that the questionnaire instrument is an internally consistent and reliable measurement tool. These values verify that items corresponding to each construct consistently operationalise the same underlying dimension, therefore reducing the chance that composite factor scores are inflated or affected through inconsistent measurement. Moreover, the acceptable reliability of all seven constructs also supports the usage of these scales in pervasive inferential statistical analysis, like the regression and ANOVA methods reported in the results section.

**Table 5: Pearson Correlation Matrix – Key Factors and Organisational Goal Performance (N = 300)**

| Factor                   | LQ   | RA     | SE     | PS     | RM     | GP     |
|--------------------------|------|--------|--------|--------|--------|--------|
| Leadership Quality (LQ)  | 1.00 | 0.61** | 0.57** | 0.63** | 0.59** | 0.74** |
| Resource Allocation (RA) | –    | 1.00   | 0.53** | 0.66** | 0.61** | 0.68** |

|                             |   |   |      |        |        |        |
|-----------------------------|---|---|------|--------|--------|--------|
| Stakeholder Engagement (SE) | – | – | 1.00 | 0.58** | 0.54** | 0.71** |
| Planning & Scheduling (PS)  | – | – | –    | 1.00   | 0.67** | 0.73** |
| Risk Management (RM)        | – | – | –    | –      | 1.00   | 0.69** |
| Goal Performance (GP)       | – | – | –    | –      | –      | 1.00   |

Note: \*\* denotes significance at  $p < 0.01$  (two-tailed). LQ = Leadership Quality; RA = Resource Allocation; SE = Stakeholder Engagement; PS = Planning and Scheduling; RM = Risk Management; GP = Composite Goal Performance Index.

Table 5 summarizes the Pearson correlation matrix between the five main factors and the composite goal performance (GP) index. The correlations are all positive, all statistically significant at  $p < 0.01$ , and in line with the theoretical expectation that these factors reinforce one another in effective project management systems. The strongest bivariate associations with goal performance and thus, confirming their primacy among the factors identified, are leadership quality ( $r = 0.74$ ) and planning and scheduling ( $r = 0.73$ ). Stakeholder engagement ( $r = 0.71$ ) is even similar in the strength of its correlation, followed by resource allocation ( $r = 0.68$ ), and risk management ( $r = 0.69$ ), which also have substantively meaningful relationships with the outcome variable. The moderate inter-factor correlations ( $r=0.53$ , between resource allocation and stakeholder engagement;  $r=0.67$ , between planning and scheduling and risk management) [28], indicate that these are conceptually distinct yet related constructs, supporting the decision to model them as separate variables using regression. Variance inflation factor (VIF) diagnostics indicated that multicollinearity did not substantially bias the regression estimates (all VIF values less than 3.5).

## 5. RESULTS AND DISCUSSION

### Statistical Analysis

Table 3 highlights the main inferential statistical results of the study, supporting results of multiple regression analysis, one-way ANOVA (for between sector comparisons) and independent samples t-tests (for between outcome groups comparisons) are outlined in the three following result tables. Each of these tables is supplemented by an analytical interpretation placing the results in light of the research aims and the extant literature.

**Table R1: Multiple Regression Analysis – Predictors of Organisational Goal Performance**

| Predictor Variable | B (Unstd.) | Std. Error | Beta (beta) | t-value | p-value |
|--------------------|------------|------------|-------------|---------|---------|
| Constant           | 0.412      | 0.183      | –           | 2.25    | 0.025   |
| Leadership Quality | 0.347      | 0.051      | 0.341       | 6.80    | <0.001  |

|                        |       |       |       |      |        |
|------------------------|-------|-------|-------|------|--------|
| Resource Allocation    | 0.263 | 0.048 | 0.288 | 5.48 | <0.001 |
| Stakeholder Engagement | 0.218 | 0.053 | 0.231 | 4.11 | <0.001 |
| Planning & Scheduling  | 0.301 | 0.049 | 0.310 | 6.14 | <0.001 |
| Risk Management        | 0.275 | 0.052 | 0.267 | 5.29 | <0.001 |

Note:  $R^2 = 0.673$ ; Adjusted  $R^2 = 0.664$ ;  $F(5, 294) = 121.34$ ;  $p < 0.001$ . Dependent variable: Composite Organisational Goal Performance Index. All VIF values  $< 3.5$ .

The predictive capability of the five primary factors for organisational goal performance is summarised in Table R1 from the previously developed multiple linear regression model. The model has a good predictive capability overall, explaining 67.3% of the variance in goal performance outcomes (Adjusted  $R^2 = 0.664$ ;  $F(5, 294) = 121.34$ ;  $p < 0.001$ ). Leadership quality is recognised as the highest predictor (beta = 0.341,  $B = 0.347$ ,  $t = 6.80$ ,  $p < 0.001$ ) indicating that improvement in this measure represents the more Number one gain in organisational goal performance obtaining when controlled for all other variables. In turn, planning and scheduling ranks second (beta = 0.310,  $B = 0.301$ ,  $t = 6.14$ ,  $p < 0.001$ ), resource allocation (beta = 0.288,  $t = 5.48$ ), risk management (beta = 0.267,  $t = 5.29$ ), and stakeholder engagement (beta = 0.231,  $t = 4.11$ ), all significant at  $p < 0.001$ . The beta coefficients indicates that leadership competence and structured planning governance are much stronger than operational factors such as risk management and resource management[4] underlines either that strategic and behavioural dimensions of project management are at least as important as specified in technical management capabilities. The good fit of the model and the fact that all predictors were statistically significant provide strong evidence that the factor set identified describes goal performance variation fully and adequately.

**Table R2: One-Way ANOVA – Sector-wise Differences in Factor Scores**

| Factor                 | Public (Mean) | Private (Mean) | NGO (Mean) | F-value | Significance |
|------------------------|---------------|----------------|------------|---------|--------------|
| Leadership Quality     | 3.74          | 3.92           | 3.41       | 12.34   | $p < 0.001$  |
| Resource Allocation    | 3.52          | 3.87           | 3.28       | 10.17   | $p < 0.001$  |
| Stakeholder Engagement | 3.61          | 3.78           | 3.44       | 8.92    | $p < 0.001$  |
| Planning & Scheduling  | 3.68          | 3.95           | 3.39       | 11.45   | $p < 0.001$  |
| Risk Management        | 3.57          | 3.83           | 3.31       | 9.76    | $p < 0.001$  |

Note: All F-values significant at  $p < 0.001$ . Post-hoc comparisons (Tukey's HSD) indicate significant differences primarily between private sector and NGO groups across all factors.

The results of one-way ANOVA are provided in Table R2 to assess the significance of differences in mean factor scores across the three organisational sectors public, private, and NGO. The differences for each of the five factors were statistically significant ( $p < 0.001$  in every case), which also confirms that sector type is a good

moderator of factor-level performance. While the mean scores across all factors recorded by the private sector organisations remains the highest, dominance in planning and scheduling (mean=3.95) and allocation of resource (mean=3.87) indicate the competitive accountability pressures and performance management culture intrinsic to market-driven organisations. Public sector organisations are in an intermediate position, but overall NGOs score the least across all dimensions, with risk management presenting the lowest NGO mean (mean = 3.31). Tukey's HSD post-hoc comparisons show that pairwise differences are most prominent between private-public and private-NGO groups, while public-private differences, although also significant, are smaller. The quantitative support at the factor level and evidence of the gap's pervasiveness (across all dimensions of project governance, not limited to planning) extends earlier qualitative observations by Hyväri [22] pertaining to differences between sectors in planning rigour.

Results are shown in independent samples t-test, and describe mean factor scores for the successful project and failed project subgroups in R3. Evidence for the primary hypothesis that successful projects can be systematically differentiated from those that fail across all six factors examined is substantial and statistically significant mean differences are recorded ( $p < 0.001$ ). Direct evidence for its discriminatory role is given by the trait showing the largest mean difference (leadership quality median difference: 2.13; t-value: 18.64;  $p < 0.001$ ). Planning and scheduling (mean diff. = 4.03,  $p < 0.001$ ; 95% CI =  $4.00 \pm 4.06$ ,  $p = 0.001$ , mean = 3.61, and management of risk (mean difference In line with the previous results, ( $\Delta B = 2.87$ ,  $t = 5.87$ ), while ( $\Delta B = 1.91$ ,  $t = 16.88$ ) demonstrate large deviations and confirm that structured governance and proactive risk management are the basic prerequisites for the accomplishment of project goals. Communication effectiveness (mean diff. = 1.88,  $t = 15.44$ ,  $p = 0.002$ ) speaks to substantively that informational clarity and inter-team coordination are vital determinants of project team goal convergence. Such found differences reach statistical significance at  $p < 0.01$  or better for all six factors, a consistency and magnitude that provide strong quantitative support that together, the identified factors form a statistically & empirically ground framework for predicting and analyzing variation in project outcomes.

**Table R3: Independent Samples t-test – Successful vs. Failed Project Groups**

| Factor                      | Success Mean | Failure Mean | Mean Diff. | t-value | p-value |
|-----------------------------|--------------|--------------|------------|---------|---------|
| Leadership Quality          | 4.31         | 2.18         | 2.13       | 18.64   | <0.001  |
| Resource Allocation         | 4.12         | 2.34         | 1.78       | 16.32   | <0.001  |
| Stakeholder Engagement      | 4.07         | 2.09         | 1.98       | 15.77   | <0.001  |
| Planning & Scheduling       | 4.22         | 2.41         | 1.81       | 17.09   | <0.001  |
| Risk Management             | 4.18         | 2.27         | 1.91       | 16.88   | <0.001  |
| Communication Effectiveness | 4.03         | 2.15         | 1.88       | 15.44   | 0.002   |

Note: Welch's t-test applied (equal variances not assumed; Levene's test significant). All results significant at  $p < 0.01$ . Degrees of freedom adjusted accordingly.

Independent samples t-test results are indicated in Table R3 comparing the mean factor scores between the two subgroups of successful versus failed projects. Large and statistically significant mean differences are reported on all six factors examined, supporting Hypothesis 1 that performance on the factor-level systematically discriminates between successful and unsuccessful projects. Leadership quality has the largest mean difference (2.13) and the greatest t-value (18.64,  $p < 0.001$ ), thus delivering the strongest empirical support for its discriminatory function. Planning and scheduling (mean diff. = 1.81,  $t = 17.09$ ) respectively and for risk management (mean diff. Similar differences are shown for large coefficient estimates (All estimates:  $p$  less than or equal to 0.001;  $b = 1.91$ ,  $t = 16.88$ ), confirming that structured governance and proactive risk management are primary preconditions for attainment of project objectives. Communication effectiveness (mean diff. = 1.88,  $t = 15.44$ ,  $p = 0.002$ )(†) to meaningfulness, further supporting that clarity of information and coordination between teams is important in determining goal-oriented convergence of project teams. There is evidence for the validity and empirical generalization of the model in the remarkable consistency and magnitude of the differences observed in the study across all six factors, all highly statistically significant at  $p < 0.01$  or better.

### Critical Analysis and Comparison with Past Work

The empirical results of this study are broadly consistent although extending more substantively with the existing literature on project management. The strong predictive power of leadership quality in explaining organised goal (set-1) goals performance ( $\beta = 0.341$ ) supports the central assertion of Turner and Muller [13] who deemed leadership style as the number one hitting attribute of a project manager regardless of project categories, i.e., success. The current analysis builds on this finding by applying a multi-sector comparative framework and regression modelling to show that leadership quality, while distinguishing between successful and failed projects by raw mean scores, independently explains the largest share of variance in the composite goal performance index. This supports the current project management literature by demanding that competency-based leadership development is adopted as a strategy for those organisations wishing to improve delivery rates in project management.

The enduring and low-relative impact of planning and scheduling ( $\beta = 0.310$ ) as confirmed in some research studies [16], synthesizes with the findings of Dvir and Lechler [12] as initial plan quality is a significant predictor of an outcome measure even after controlling for deviation from initial plan. In contrast, this paper contributes to the literature by also demonstrating that the planning-performance relationship is robust across all three sector types and not just one, so it works as a general rather than a context specific driver of goal achievement. The ANOVA findings contribute an important note of caution: the relationship is directionally universal but of a variable magnitude across sectors, with private sector organisations reflecting significantly greater planning scores than NGOs. This result is consistent with the findings from Hyväri [22] and indicates that planning process rigor is a predictor of performance and may also serve as an indicator of the institutional maturity and accountability structures surrounding project execution.

The correlation between stakeholder engagement and goal performance in the present study ( $r = 0.71$ ) is comparable to Karlsen [24] and extremely consistent with Diallo and Thuillier [23], who showed for international development projects in resource-limited settings that trust and communication are overriding leadership predictors of success. Although the regression coefficient for stakeholder engagement ( $\beta = 0.231$ ) is the smallest among the five predictors, it is still statistically significant and before noted non-trivial, which means that this factor adds an independent variance component not captured by leadership or planning variables. This finding partially contradicts earlier CSF frameworks (e.g. Belassi and Tukel [25]) giving lower weight to the relational and communicative dimensions implying that stakeholder management has become more important in current project environments characterized by higher levels of public accountability, expectations for participatory governance and the nature of project delivery models based on multiple stakeholders. In comparison with the construction-based sample studied by Alzahran and Emsley (2013), where technical contractor competency was identified as the distinct discriminating variable based on importance, the cross-sector sample in the present study reveals a spread effect, consistent with behaviour-based mechanisms of influence of the general multidimensional project success framework [11] and the conclusion that process quality mediates the relationship between managerial inputs and project outcomes [27].

## 6. CONCLUSION

We have provided a statistically robust empirical study with a comparative analysis of 200 failed/successful projects from public, private & non-governmental organizations and their influence on project delivery through the lens of organisational goal performance. The results offer consistent and compelling evidence that leadership quality, planning and scheduling, risk management, resource allocation and stakeholder engagement are the five most important and knotted independently predictive drivers of project success, collectively explaining 67.3% of the variance in the organisational goal performance. There were statistically significant and substantively large differences in all factor scores between successful and failed project groups, with private sector organisations obtaining higher factor scores than either public sector or NGO counterparts across all dimensions. The multi-method analytical strategy (which combines reliability testing alongside Pearson correlation analysis, independent samples t-tests, one-way ANOVA, and multiple regression modelling) establishes the internal consistency and robustness of the study findings and their basis in a representative and diverse sample. The implications of this are that they recommend investing in transformational leadership development, institutionalising structured planning and scheduling protocols and implementing enterprise-wide risk governance systems as the low hanging fruit interventions that offer the highest return for organisations that want to reduce their project failure rates and improve goal accomplishment. Future research should build on this framework using longitudinal panel designs, structural equation modelling to explore mediation and moderation effects, and domain-specific deep-dive studies to chart the pathways through which these factors interact to influence organisational goal outcomes over time.

## REFERENCES

- [1] P. W. G. Morris and G. H. Hough, *The Anatomy of Major Projects: A Study of the Reality of Project Management*. Chichester: Wiley, 1987.
- [2] K. Jugdev and R. Muller, "A retrospective look at our evolving understanding of project success," *Project Manag. J.*, vol. 36, no. 4, pp. 19-31, 2005.
- [3] J. Pinto and D. P. Slevin, "Project success: Definitions and measurement techniques," *Project Manag. J.*, vol. 19, no. 1, pp. 67-72, 1988.
- [4] M. Ika, "Project success as a topic in project management journals," *Project Manag. J.*, vol. 40, no. 4, pp. 6-19, 2009.
- [5] R. Atkinson, "Project management: Cost, time and quality, two best guesses and a phenomenon," *Int. J. Project Manag.*, vol. 17, no. 6, pp. 337-342, 1999.
- [6] D. Baccarini, "The logical framework method for defining project success," *Project Manag. J.*, vol. 30, no. 4, pp. 25-32, 1999.
- [7] F. Cooke-Davies, "The real success factors on projects," *Int. J. Project Manag.*, vol. 20, no. 3, pp. 185-190, 2002.
- [8] K. T. Yeo, "Critical failure factors in information system projects," *Int. J. Project Manag.*, vol. 20, no. 3, pp. 241-246, 2002.
- [9] B. Wateridge, "How can IS/IT projects be measured for success?," *Int. J. Project Manag.*, vol. 16, no. 1, pp. 59-63, 1998.
- [10] L. Crawford, "Project management competence: The value of standards," Ph.D. dissertation, Henley Management College, Brunel Univ., 2000.
- [11] A. J. Shenhar, D. Dvir, O. Levy, and A. C. Maltz, "Project success: A multidimensional strategic concept," *Long Range Planning*, vol. 34, no. 6, pp. 699-725, 2001.
- [12] D. Dvir and T. Lechler, "Plans are nothing, changing plans is everything: The impact of changes on project success," *Res. Policy*, vol. 33, no. 1, pp. 1-15, 2004.
- [13] J. R. Turner and R. Muller, "The project manager's leadership style as a success factor on projects: A literature review," *Project Manag. J.*, vol. 36, no. 1, pp. 49-61, 2005.

- [14] T. H. Nguyen, B. S. Ogunlana, and D. T. X. Lan, "A study on project success factors in large construction projects in Vietnam," *Eng. Constr. Archit. Manag.*, vol. 11, no. 6, pp. 404-422, 2004.
- [15] G. Muller and K. Turner, "Matching the project manager's leadership style to project type," *Int. J. Project Manag.*, vol. 25, no. 1, pp. 21-32, 2007.
- [16] H. Kerzner, *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*, 12th ed. Hoboken: Wiley, 2017.
- [17] L. Clarke, "Fundamental principles of project management," *J. Property Valuat. Invest.*, vol. 17, no. 1, pp. 105-107, 1999.
- [18] O. Zwikael and J. Smyrk, *Project Management for the Creation of Organisational Value*. London: Springer, 2011.
- [19] P. Bannerman, "Defining project success: A multilevel framework," in *Proc. PMI Res. Conf.*, Warsaw, Poland, 2008.
- [20] S. Hartman and R. Ashrafi, "Project management in the information systems and information technologies industries," *Project Manag. J.*, vol. 33, no. 3, pp. 5-15, 2002.
- [21] N. Alzahrani and N. Emsley, "The impact of contractors' attributes on construction project success: A post construction evaluation," *Int. J. Project Manag.*, vol. 31, no. 2, pp. 313-322, 2013.
- [22] I. Hyväri, "Success of projects in different organisational conditions," *Project Manag. J.*, vol. 37, no. 4, pp. 31-41, 2006.
- [23] M. T. Diallo and T. Thuillier, "The success of international development projects, trust and communication: An African perspective," *Int. J. Project Manag.*, vol. 22, no. 3, pp. 237-252, 2004.
- [24] J. T. Karlsen, "Stakeholder management in a systems engineering perspective," *Syst. Eng.*, vol. 5, no. 1, pp. 75-86, 2002.
- [25] W. Belassi and O. I. Tukel, "A new framework for determining critical success/failure factors in projects," *Int. J. Project Manag.*, vol. 14, no. 3, pp. 141-151, 1996.
- [26] R. Young and E. Jordan, "Top management support: Mantra or necessity?," *Int. J. Project Manag.*, vol. 26, no. 7, pp. 713-725, 2008.
- [27] F. A. Mir and A. H. Pinnington, "Exploring the value of project management: Linking project management performance and project success," *Int. J. Project Manag.*, vol. 32, no. 2, pp. 202-217, 2014.

- [28] S. F. Abu-Hijleh and R. G. Wegner, "Assessing risk management practices in project-based organisations," *Int. J. Inf. Technol. Project Manag.*, vol. 8, no. 1, pp. 37-54, 2017.
- [29] Y. H. Kwak and F. T. Anbari, "Benefits, obstacles and future of six sigma approach," *Technovation*, vol. 26, no. 5-6, pp. 708-715, 2006.
- [30] P. Patanakul and D. Milosevic, "The effectiveness in managing a group of multiple projects: Factors of influence and measurement criteria," *Int. J. Project Manag.*, vol. 27, no. 3, pp. 216-233, 2009.

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