Research Article

# Unlocking Success in NGOs: The Power of Servant Leadership

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**This study elucidates the multifaceted influences affecting successful project outcomes within Non-Governmental Organizations (NGOs), with an emphasis on Servant Leadership (SL). The primary objective was to probe the impact of SL on project success. The empirical evidence robustly attests to a positive association between SL practices and the success of projects within NGOs. These practices encompass empowering and supporting team members, cultivating a sense of ownership, and promoting personal and professional development, which collectively contribute to an environment that bolsters devotion, motivation, and active participation. Additionally, SL fosters effective communication, knowledge sharing, and collaborative problem-solving. Interestingly, the study revealed that Team Identity (TI) could have a nuanced effect on the relationship between SL and project success. In cases where team members exhibit strong cohesion and shared objectives, the positive influence of SL might be diminished, highlighting the complex interplay between TI and SL. Furthermore, the study emphasizes the criticality of ingraining SL principles into an NGO's organizational fabric and values. Recommendations include incorporating SL criteria in leadership selection processes and providing continuous training to nurture SL competencies. The study offers invaluable insights for NGOs aiming to optimize project outcomes through the judicious application of SL and understanding of team dynamics.**

## 1. Introduction

### *1.1. The Importance of Leadership in NGOs*

In an era of pressing global challenges, non-governmental organizations (NGOs) are instrumental in addressing intricate humanitarian and development issues. These organizations' success is

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contingent on various factors, with leadership emerging as a significant aspect. This study delves into the potential of servant leadership, a leadership style that prioritizes the growth and well-being of the team and the community in driving success within NGOs. In the context of NGOs, predominantly project-based entities concerned with community development goals (Taherdoost, 2016), leadership is a critical determinant of successful project management (Pinto and Slevin, 1988; Shenhar, 2002; Mu¨ller and Turner, 2010).

The servant leadership model, given its emphasis on follower satisfaction and motivation (Liden et al., 2008a; Brière et al., 2015), may resonate well with the community-centric ethos of NGOs, potentially enhancing their project success. The exploration of this synergy forms the rationale for this research, a subject that has not received sufficient attention in the current literature. Moreover, understanding the impact of servant leadership on NGO project success in various cultural contexts presents an intriguing and valuable aspect of this investigation (Marens and Maslyn, 2017; Carvalho and Rabechini Junior, 2017).

Furthermore, the need for leadership that can inspire and empower the NGO workforce is accentuated by the NGOs' quest for credibility and legitimacy among key stakeholders (Cleveland and Cleveland, 2020). Effective leadership, reflected in the alignment of initiatives and projects with the organization's core values, emerges as a vital determinant of sustainable outcomes (Abiddin et al., 2022; Lamberti et al., 2022). Servant leadership aligns well with this requirement as a promising leadership model prioritizing follower development, potentially driving optimal team performance and successful project outcomes in NGOs (Spears, 1996).

### *1.2. Project Success*

In the Non-Governmental Organizations (NGOs) context, project success conventionally denotes the attainment of defined outcomes within a specific timeframe and allocated resources (Rose, 2013). This multifaceted concept cannot be confined to a single dimension (Ika et al., 2012; Khang and Moe, 2008). It often correlates with generating effective solutions for community issues, making the best use of limited funds in NGOs (Kealey et al., 2005). Essential elements of success include adaptability, knowledge communication, collaboration skills, leadership practices, ethical norms, situational awareness, and change management (Brière et al., 2015). Involvement of the local community and establishing relationships with local corporations also prove significant for successful project

implementation and sustainability (Diallo and Thuillier, 2005). However, these interpretations may differ significantly across authors, regions, or contexts (Samáková et al., 2013).

Project management, a discipline devoted to planning, organizing, and controlling resources for the achievement of specific project goals and objectives, plays a crucial role in ensuring project success (Rezvani et al., 2016). Projects, being inherently unique and complex, exhibit a defined lifecycle alongside distinct characteristics, interdependencies, and occasional conflicts (Rose, 2013). The project manager, as a crucial figure, together with the team, holds significant sway over the ultimate outcome of the project. Therefore, it becomes necessary for the project manager to have comprehensive knowledge of project management, particularly in planning, organizing, monitoring, and controlling all project aspects. Motivating all involved to achieve the project's objectives also falls within the manager's responsibilities (Rezvani et al., 2016).

Historically, the focus on project success factors has been centred on development projects (Ika et al., 2012; Khang and Moe, 2008); construction, and infrastructure (Chan et al., 2004; Ghazali et al., 2017; Wai et al., 2013). This focus explains why project management primarily finds application in engineering fields with clearly defined, measurable, and widely accepted criteria for success (Aga et al., 2016). Traditional triangle criteria of time, budget, and project quality are commonly used to evaluate project success (Aga et al., 2016; Ika, 2015). However, in recent years, additional criteria such as strategic objectives of the organization, end-user satisfaction, benefit to the organization, benefit to project personnel and stakeholders, and business success have been utilized (Aga et al., 2016).

Projects executed by for-profit organisations aim to provide additional value to the organisation (Hernandez and Cormican, 2016), and their results can be assessed using a set of quantitative metrics (Latif and Williams, 2017). Conversely, NGO projects intend to address and mitigate pressing social, economic, and environmental issues (Latif and Williams, 2017). Consequently, such projects face uncertainty and challenges in evaluating outcomes (Ronalds, 2012) due to the nature of the project goals and the involvement of divergent stakeholder groups (Latif and Williams, 2017). Moreover, NGO project outcomes are often less visible and measurable than projects executed by for-profit organisations (Khang and Moe, 2008). Hence, we have employed Ika (2012)'s framework for measuring project success in this study as it aligns closely with the study's objectives.

### *1.3. Servant leadership and project success*

Servant leadership (SL), a leadership model first conceptualised by Robert K. Greenleaf in the 1970s, is recognised for its focus on meeting the needs of team members, encouraging their personal development, and fostering a sense of community (Greenleaf, 1977; Liden et al., 2008a). This style of leadership is especially pertinent in the context of NGOs, where the complex and often challenging operational environment necessitates a leadership approach that motivates and empowers team members (Eva, 2019; Greenleaf, 1977). By prioritising the needs and growth of individuals and the community, SL can significantly contribute to project success. Various studies have supported this notion in different contexts (Hale, 2007; Parris, 2013).

Moreover, the reciprocal relationships between leaders and followers, central to the concept of SL, can positively influence the performance of project teams, boosting their motivation and commitment to project goals (Van Dierendonck, 2011). As the success of projects in NGOs largely depends on the performance of these teams, fostering such reciprocal relationships can be a critical factor in achieving project success.

### *1.4. Research Aim and structure*

This study aims to deepen understanding of the complex factors that play a crucial role in determining the success of initiatives within the unique context of NGOs. By examining the dynamics and mechanisms underlying project management practices in NGOs, this study seeks to gain valuable insights into what drives effective outcomes. Specifically, the research emphasises the importance of team identity and climate as critical determinants of project success within NGOs. To achieve this, we employ a comprehensive analytical approach involving hierarchical regression and a binary logistic model to determine the exact relationships between team identity, team climate, and project success. Implementing hierarchical regression analysis aims to generate solid, evidence-based recommendations to inform and direct future project management strategies within NGOs.

The organisation of the subsequent sections of this research is as follows: Section 2 introduces the fundamental principles of servant leadership theory and social identity theory, emphasising their roles in fostering team identity and team climate, and proposing research hypotheses. The methodology and data employed in the study are outlined in Section 3, followed by the presentation of results and study findings in Section 4. Section 5 engages in a discussion of the study findings, while Section 6 addresses limitations and offers directions for future research.

## 2. Theoretical Framework, Literature Review, and Hypothesis Development

### *2.1. Servant Leadership Theory*

Servant leadership is anchored in prioritising followers' needs through a leader's inherent motivation to serve, fostering an environment that bolsters autonomy, learning, and growth; it's a timeless principle reflected in the tenets of various religions and philosophies and exemplified by luminaries such as Mother Teresa, Gandhi, and Martin Luther King, Jr. (Greenleaf, 1977; Sendjaya and Sarros, 2002; Keith, 2008).NGOs naturally associate with SL due to their core mission of serving marginalised communities. By concentrating on the needs of the served with an empathetic and service-oriented approach, SL holds the potential to enhance NGO effectiveness, inspire and empower employees, cultivate commitment, and maximise team performance (Farling et al., 1999). Notwithstanding its growing appeal across diverse sectors, empirical research examining the ramifications and efficacy of SL within NGOs is limited, indicating an untapped potential for future studies (Fischer et al., 2017).

Moreover, the potential of servant leadership in NGOs extends beyond improving internal team dynamics. By embodying service-centric values, NGOs can forge stronger relationships with the communities they serve, enhancing their impact and effectiveness. This is particularly vital in humanitarian work, environmental conservation, and social justice, where trust and collaboration between NGOs and local communities can determine the success or failure of initiatives (Parris and Henrichs, 2004). Hence, by embracing and practising SL, NGOs can amplify their influence and effectiveness internally within their teams and externally with the communities they serve.

### *2.2. Social Identity Theory*

Social Identity Theory (SIT) is a comprehensive framework that explains how individuals identify with groups and the behavioural implications of this identification (Tajfel and Turner, 1979). In essence, SIT suggests that individuals categorise themselves and others into different social groupings, such as gender, age, religious affiliation, and organisational membership. The identification with a particular group results from the perception of oneness with or belongingness to that group, thus contributing to the individual's self-concept (Tajfel and Turner, 1979; Turner, 1985). This social categorisation

serves a dual function: first, it provides a systematic means of defining others, and second, it allows individuals to define themselves within their social environment.

For NGOs, the understanding and application of SIT can be pivotal. The employees and volunteers in NGOs often have strong social identification with the organisation, given the shared values and objectives that characterise these entities.

They identify with the mission of the NGO, which in turn forms a part of their social identity. The strength of this identification can have implications for their commitment to the organisation, job satisfaction, and overall performance (Tidwell, 2005). Furthermore, it is also notable that SIT can play a key role in shaping the interactions of NGOs with the communities they serve, especially in instances where strong social identification exists between the members of the community and the NGO.

However, it is important to consider the complexity and multi-dimensionality of social identities in this context. Employees and volunteers may simultaneously identify with multiple social groups, which can have nuanced implications for their behaviour and motivations. This can be particularly relevant in NGOs that operate in diverse social, cultural, and political contexts. Understanding the dynamics of social identity can therefore help NGOs to foster a sense of belonging and cohesion among employees and volunteers, effectively navigate the social landscape of the communities they serve, and ultimately enhance their impact and effectiveness (Smith et al., 2004; Julien et al., 2010).

### *2.3. Influence of Servant Leadership on Team Climate*

Team climate, defined as a set of norms, attitudes, and expectations that individuals perceive to operate in a specific social context (Schneider et al., 2011), plays a crucial role in the effectiveness of project development or innovation, largely depending on the shared experiences of team members (Rosso, 2014). The Team Climate Inventory, a measure of team climate for innovation, comprehensively depicts the level and quality of teamwork (Ragazzoni et al., 2002). This inventory assesses participative safety, support for innovation, vision, task orientation, and social desirability, providing a robust framework for understanding the dynamics of team climate.

A key element of the TC perspective is shared objectives and vision (van Knippenberg, 2017). Knowledge sharing, which influences the social climate in teams, induces interaction and reciprocation, providing a platform for team socialization (Radaelli et al., 2014) and instilling trust among team members (Alsharo et al., 2017). This has significant implications for TC, with intensive knowledge sharing between team members developing a positive perception of the overall team

collaboration climate (Flinchbaugh et al., 2016). Furthermore, knowledge sharing has created a positive attitude toward diversity in heterogeneous teams (Lauring and Selmer, 2011). However, the role of team characteristics and TC stability in knowledge-sharing outcomes remains under-researched (Silva de Garcia et al., 2022).

In the context of TC, SL emerges as a pivotal aspect. SL encourages leaders to put the needs of their team members first, foster their development, and contribute to the community's overall well-being. The implementation of SL can have a substantial impact on TC. By fostering an environment of support and empowerment, SL can bolster participative safety, where team members feel secure in expressing their ideas and taking interpersonal risks (Edmondson, 1999). Moreover, SL, through their emphasis on stewardship and creating value for the community, inherently promote a shared vision and support for innovation within the team (Eisenbeiss, 2012). By serving as role models, they can facilitate higher levels of trust and cooperation among team members, which are essential components of a positive team climate.

Furthermore, SL can have a significant impact on how knowledge is shared within the team. Servant leaders can encourage more open communication and collaboration by creating an environment where team members feel valued and supported. This can lead to increased knowledge sharing, which in turn can positively affect the team climate and foster innovation (Dennis et al., 2010). SL, with its focus on serving and empowering team members, can be instrumental in creating a positive TC conducive to innovation, cooperation, and the achievement of shared objectives.

### *2.4. Influence of Servant Leadership Style on Team Identity*

SL in NGOs focuses on serving and empowering team members to work towards shared humanitarian and development objectives. This, in turn, influences the team identity, which is pivotal for the effectiveness of NGOs (Spears, 2005). In NGOs, team members often hail from diverse backgrounds and nationalities. In such multicultural environments, SL plays a critical role in fostering an inclusive climate that values diversity and supports the team's collective identity (Mitchell et al., 2015). The inclusive nature of servant leadership aids in reducing perceived status differences and forging a shared team identity (Randel et al., 2018). This is crucial as the lack of shared TI as a significant factor contributing to social loafing in teams composed of multiple nationalities (Abraham and Trimutiasari, 2015).

The formation of team identity in NGOs can, however, sometimes be impeded by historical and cultural barriers. Members may hesitate to voice their ideas, particularly in multicultural teams with a history of conflict or mistrust. In such cases, SL plays a critical role in bridging these gaps and fostering a culture of trust and collaboration. Furthermore, in NGOs, issues of authority are often intertwined with TI. This is particularly the case when NGOs collaborate across borders or cultural contexts. SL, with its focus on service over hierarchy, can help to navigate these complex dynamics, ensuring that the team's collective identity and purpose remain at the forefront (Greenleaf, 2002). Sl, therefore, fosters TI by prioritizing the needs of team members, encouraging shared objectives, valuing diversity, and promoting ethical and inclusive practices. This is essential for NGOs to build cohesive and effective teams that can respond to complex humanitarian challenges with agility and purpose.

### *2.5. Hypothesis statements*

Based on the literature discussed above, we aims to examine the following three hypotheses [H]:

- **H1:** A servant leadership approach to management will positively affect project success in an NGO setting.
- **H2:** Team climate will positively affect project success in an NGO setting.
- **H3:** Team identity positively affects project success in an NGO setting.

As shown in Figure 1, our study proposes that SL has a direct influence on project success (H1) while also affecting TC and TI, both of which positively contribute to project success (H2 and H3). It is worth noting that the figure does not illustrate our assumptions regarding the potential moderating influence of control variables on success, which will be discussed further in the subsequent section. The concept of moderation becomes particularly relevant in teams characterized by strong cohesiveness and shared purpose, where the influence of SL on project success may be less pronounced. This underscores the significance of TC and its elements, such as trust, communication, and cooperation. Moreover, in situations where team members have a robust TI, they may rely less on the direct impact of SL and more on the overall team environment to foster a sense of belonging and motivation. Consequently, we anticipate that a favourable TC nurtured by SL will exert a greater influence on project success.

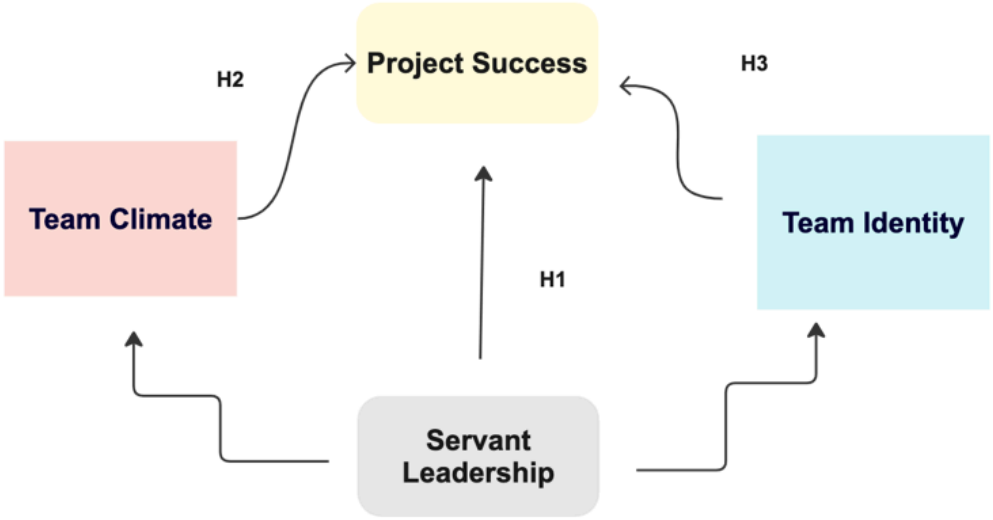


**Figure 1.** Servant Leadership Research Framework

## 3. Study Data and Methodology

### *3.1. Overview of the data*

Our study population consists of individuals with experience implementing projects in NGO settings across diverse regions, including the US, Latin America, Asia, Africa, and Europe. To ensure the representativeness of NGOs engaged in humanitarian and development projects, 25 NGOs were randomly selected from each geographic location based on a comprehensive Google search, following the methodology outlined by Kotrlik and Higgins (2001). Given the dispersed nature of the target respondents, online versions of the questionnaire were developed, and various restrictions were implemented to avoid repetitive responses from the same individuals. The questionnaire was emailed to NGO representatives, who were instructed to share the link with individuals directly involved in the projects, such as volunteers and paid workers, excluding project managers.

This research employs the renowned Harvard Dataset provided by Mombeuil et al. (2023) for an in-depth examination of the relationship between servant leadership and project performance, focusing on attributes such as project success, gender, education, age, and job position among 451 individuals across various regions and project types. A substantial proportion of the dataset's projects, amounting to 20.2%, predominantly address environmental issues, followed closely by community/family-

centred initiatives (16.99%). Healthcare services constitute 14% of the dataset, while food security makes up 12%. Additionally, the dataset sheds light on job positions of project leaders, which are classified into seven roles: (a) Project Management Office, (b) Project Portfolio Manager, (c) Chief Technology Officer, (d) Project Team Member, (e) Volunteer Team Member, (f) Team Lead/Project Manager, and (g) others. This diverse data composition enables a comprehensive and multifaceted analysis of the ongoing initiatives. Further information on the study demographics can be found in Table 1.

In examining descriptive statistics, we found participants a mean projects success score of 5.40 and a standard deviation of 0.98, indicating that the data is fairly consistently centred around the mean and that most participants deemed their project a success. Males dominated the participant pool, accounting for approximately 62.2% of the respondents.

| Region | Valid Responses | Pct. | Categories Pct. |
|---|---|---|---|
| US | 170 | 37.7% | Food Security 11.9% |
| Latin America | 70 | 15.5% | Water supply, sanitation and hygiene projects 7.9% |
| Asia | 118 | 26.2% | Environmental Related 20.2% |
| Europe | 48 | 10.6% | Alternative low cost energy 2.8% |
| Africa | 45 | 10.0% | Capability Building 3.9% |
| Total | 451 | 100.0% | Community/family-based child development 16.9% |
| | | | Health Care Service 14.6% |
| | | | Post Disaster Relief 4.7% |
| | | | Sustainable & Affordable Construction 6.2% |
| | | | Others 11.9% |

**Table 1.** Geographic Region of Data Collection and Project Types

***Note:*** *Mombeuil et al. (2023) note that data was collected from March 2021 through to June 2021*

The participant's education level showed a moderate level of diversity, as noted by the standard deviation of 0.85, The participant age distribution showed a degree of diversity ($\sigma$ = 0.80), while job positions among the participants exhibited significant variation ($\sigma$ = 1.71) with a mean of 3.08. Overall, these findings highlight the diverse characteristics and perspectives within the participant sample. Descriptive statistics also display the interaction effects between SL, TI and TC. Interaction effects aid in unraveling the intricate relationships and nuanced influences between variables, thereby providing a deeper understanding and avoiding oversimplified conclusions about their interplay. By exploring these interactions, we aim to capture the complex dynamics and uncover practical implications in real-world scenarios. From the interaction effects, we note that the interaction attribute pairs, such as SL*TI, SL*TC, and TI*TC, revealed interesting patterns, with means ranging from 0.7 to 0.8 and standard deviations hovering around 1.5. Notably, the three-way interaction (SL*TI*TC) exhibited a mean of -0.48 and a high standard deviation of 4.13, indicating significant variability and suggesting the presence of complex relationships between these variables. Descriptive statistics can be found in Table 2

| | N | Min | Max | Mean | Std. Dev | Skewness |
|---|---|---|---|---|---|---|
| **Project Success (PS)** | 451 | 1.33 | 7.00 | 5.40 | 0.989 | -0.828 |
| **Education** | 451 | 1.00 | 5.00 | 3.21 | 0.845 | -0.304 |
| **Age** | 451 | 2.00 | 5.00 | 3.08 | 0.800 | 0.538 |
| **Job Position** | 451 | 1.00 | 7.00 | 3.69 | 1.713 | -0.106 |
| **Servant Leadership (SL)** | 451 | -4.08 | 1.69 | 0.00 | 1.139 | -0.916 |
| **Team Identity (TI)** | 451 | -4.17 | 1.83 | 0.00 | 1.030 | -0.546 |
| **Team Climate(TC)** | 451 | -4.51 | 1.49 | 0.00 | 1.071 | -1.011 |
| **SL*TI** | 451 | -4.74 | 13.63 | 0.72 | 1.622 | 3.670 |
| **SL*TD** | 451 | -1.99 | 16.38 | 0.88 | 1.733 | 4.451 |
| **TI*TC** | 451 | -2.97 | 11.53 | 0.75 | 1.482 | 3.766 |
| **SL*TI*TC** | 451 | -44.46 | 9.53 | -0.48 | 4.127 | -6.636 |
| **Gender = Male** | 451 | 0.00 | 1.00 | 0.62 | 0.487 | -0.48 |

**Table 2.** Descriptive Statistics

*Note: The education level of the study participants is split as follows: high school (2.7%), college (15.5%), bachelor's (43.7%), masters (34.4%), and Ph.D. (3.5%)*

To boost the performance of statistical methods, mean-centring was applied to the three continuous variables (SL, TI, and TC). Mean-centring, a common preprocessing step in statistical analysis, represents a linear transformation of data that shifts it to the origin. A consensus exists among researchers that mean-centring variables $X_1$ and $X_2$ reduces their correlations with the product term $X_1X_2$ (Iacobucci et al., 2016). As such, mean-centring brought about a close approximation to 5 on a 7-point scale, with standard deviations near 1, as represented visually in Figures 2 - 4. Affirmation of the nearly normal distribution of these variables is further supported by updated descriptive statistics displayed in Table 3 where the standard deviation is near 1.0 as suggested by (Kim, 2013).

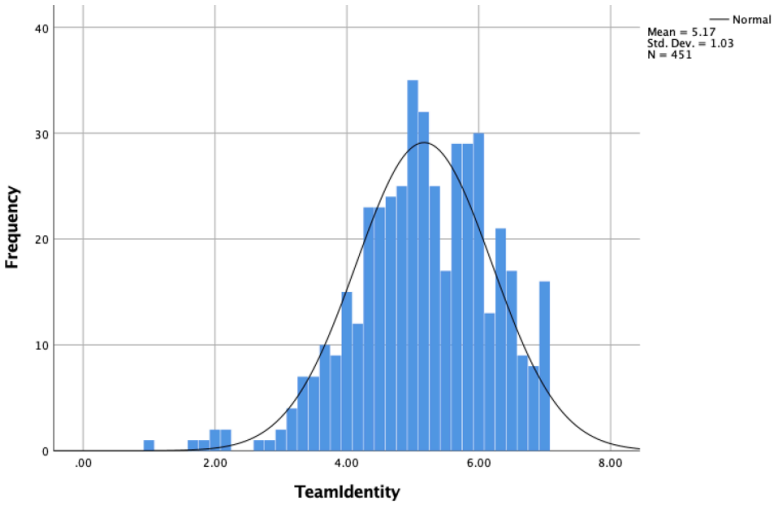


**Figure 2.** Team Identity

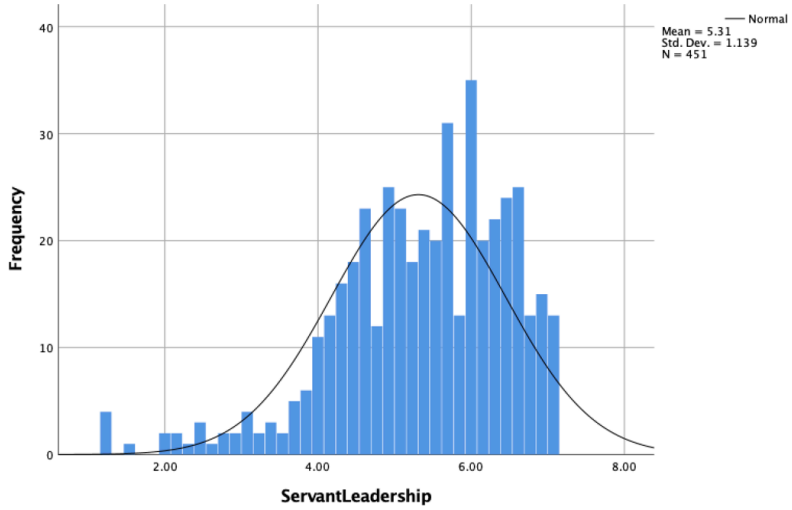


**Figure 3.** Servant Leadership


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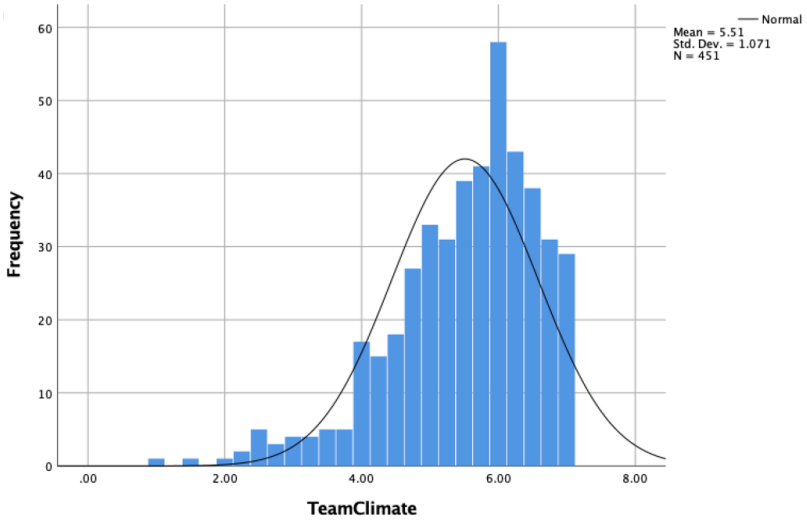


**Figure 4.** Team Climate

| | N | Min | Max | Mean | Std. Dev |
|---|---|---|---|---|---|
| **Servant Leadership (SL)** | 451 | 1.23 | 7.00 | 5.31 | 1.139 |
| **Team Identity (TI)** | 451 | 1.00 | 7.00 | 5.17 | 1.029 |
| **Team Climate (TC)** | 451 | 1.00 | 7.00 | 5.512 | 0.989 |

**Table 3.** Mean-Centered Descriptive Statistics

A preliminary analysis was conducted using a Pearson correlation matrix to gain insights into the relationships between the principal variables (Martens, 2021). As depicted in Table 4, notable positive correlations were observed between SL and PS ($r$ = 0.689), TI and PS ($r$ = 0.647), and TC and PS ($r$ = 0.732). These statistically significant findings indicate a robust association between the predictor variables and project success.


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| | SL | TI | TC | Pro Suc |
|---|---|---|---|---|
| **Servant Leadership (SL)** | 1 | .616** | .721** | .689* |
| **Team Identity (TI)** | .616** | 1 | .679** | .647** |
| **Team Climate (TC)** | .721** | .679** | 1 | .732** |
| **Project Success (PS)** | .689* | .647** | .732** | 1 |

**Table 4.** Correlation Matrix

*Note: Asterisks indicate the coefficient significance level: * for 10%, ** for 5%, and *** for 1%.*

## *3.2. Variables and Measurement*

*Project Success*. Adapted from Ika (2012), this measure utilised nine items in the question set. Project success encompasses various aspects, such as adhering to the project budget, meeting expected timelines, delivering high-quality outputs, and ensuring long-term impact. Additionally, project success involves stakeholder involvement, ownership extension to the local community, effective monitoring and reporting, economic sustainability, and satisfaction of the local community.

*Servant Leadership*. Adapted from Liden et al. (2008b), this 13-question set of measurements of leader style strongly emphasises serving and supporting team members. Leaders who exhibit servant leadership prioritise the well-being and development of their team while also upholding high ethical standards. They are effective problem-solvers, thoroughly understand the organisation's goals, and provide opportunities for their team members to acquire new skills. Servant leaders value honesty, care about the well-being of their employees, emphasise the importance of giving back to the community, and actively participate in community activities. They create an environment where employees feel comfortable seeking help and are encouraged to volunteer.

*Team Identity*. Adapted from Liden et al. (2008b); Luhtanen and Crocker (1992); Mael and Tetrick (1992). this six-question set focuses on how individuals perceive themselves as members of a particular team. It involves a sense of belonging and identification with the team and its members. Team identity is reflected in individuals seeing themselves as integral parts of the team, taking pride in their team membership, and feeling strong ties with other team members. Furthermore, team

identity encompasses the belief that the team's success is also the individual's success, fostering a shared sense of accomplishment and motivation.

*Team Climate*. Adapted from West and Altink (1996); Doosje et al. (1995); Figl and Saunders (2011), this six-question survey refers to a team's overall atmosphere and working environment. Based on a six-question set, a positive team climate is characterised by open communication, trust, and collaboration. In such a climate, team members are comfortable challenging each other's ideas and providing constructive feedback to enhance team effectiveness. They engage in

reflective practices, evaluate their weaknesses, seek different perspectives, and reassess proposed solutions. A supportive team climate encourages continuous improvement and fosters a culture of shared learning and growth. A complete list of questionnaire items making up the study's measures can be found in Table 12.

### *3.3. Methodology*

Our study employs Hierarchical Regression and Binary Logistic Regression to analyze the relationship between servant leadership and project performance. These advanced analytical methods allow us to create a robust framework for investigating the influence of SL's effect while controlling for numerous variables (Field, 2013; Hosmer et al., 2013). In addition, employing these statistical approaches allows us to uncover potential interaction effects between SL and other key factors, shedding light on how the impact of SL may vary across different contexts.

The usage of a hierarchical model permits the $\beta j$ parameters to function as a result of the overall mean association and the residual variation (Richardson et al., 2015). The hierarchical model is presented as per Eq. 1:

$\beta^j \sim N\,\delta, \tau^2$, for $j = 1,\ldots, J$ (*Eq. 1*)

where:

- $\beta^j$ denotes the $j$th beta coefficient, for $j = 1,\ldots,$
- J corresponds to the influences of each predictor variable
- $\delta$ is the mean of the normal distribution and signifies the expected value of beta coefficients.
- $\tau^2$ represents the variance of the normal distribution

The use of Binary Logistic regression follows Midi et al. (2010) in the binary logistic regression is preferred for analyzing categorical response variables because it can handle dichotomous outcomes

and non-linear associations. Its popularity has grown across diverse fields, including epidemiology, social sciences, and demography, where dichotomous dependent variables are standard. Therefore, logistic regression is an essential tool in these disciplines (Martens, 2022). This regression model is shown as per Eq. 2

$$\log( p / 1 - p ) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_p x_p \quad (Eq.\ 2)$$

where:

- Y represents the dependent variable or the outcome being predicted. $X_1$, $X_2$,..., $X_k$ are the predictor variables in the first block or level of the model.
- $\beta_0, \beta_1, \beta_2, \ldots, \beta_p$ are additional predictor variables in subsequent blocks or levels of the model.
- $\beta_0, \beta_1, \beta_2, \ldots, \beta_p$ are the coefficients (parameters) associated with each predictor variable.
- $\varepsilon$ represents the error term.

These approaches noted above provide valuable tools for conducting rigorous statistical analyses, allowing researchers to delve deeper into the data and evaluate their research hypotheses. However, it is crucial to acknowledge and address the underlying assumption of a normal distribution in the data. The normal distribution assumption is fundamental in numerous statistical tests, and the validity of the conclusions drawn from these tests relies heavily on how well this assumption is met (Ghasemi and Zahediasl, 2012). By ensuring the data follows a normal distribution, researchers can enhance the reliability and accuracy of our statistical analyses, thereby strengthening the validity of their research findings (Martens et al., 2021).

# 4. Results and Findings

## *4.1. Quantitative Findings - Bivariate Analysis*

We begin our analysis with a bivariate analysis of categorical variables to investigate the relationships between variables to understand better if and how these variables are related to each other. Data displayed in Table 5 indicates that 'Job Position' (JP) significantly influences project success, with a higher job position correlating with increased project success. However, many variables, such as Gender, do not significantly impact project success in this model, suggesting that factors other than those listed may be at play.

| Variable | B |
|---|---|
| **Gender = male** | -0.048 |
| | (-1.399) |
| **Age** | 0.009 |
| | (0.264) |
| **Education** | 0.025 |
| | (0.748) |
| **Job Position** | 0.400*** |
| | (20.339) |
| **Geographic Region** | 0.052 |
| | (1.538) |
| **NGO characteristic** | -0.014 |
| | (-0.405) |
| **Project Characteristic** | -0.051 |
| | (-1.487) |
| **Project Duration** | 0.430 |
| | (1.260) |
| **Project Size** | 0.008 |
| | (0.249) |
| **TeamSize** | 0.000 |
| | (-0.01) |
| **cons** | 3.924*** |
| | (49.003) |

**Table 5.** Bivarate Analysis of Categorical Variables

*Note: Dependent variable is Project Success. The t-statistics are presented below the coefficients. Asterisks indicate the coefficient significance level: * for 10%, ** for 5%, and *** for 1%.*

While *JP* is the sole significant variable affecting Project Success in our dataset, the potential influence of other variables should not be overlooked. Studies such as those by Mullen and Copper (1994) and Tziner (1985) highlight the impact of team homogeneity on performance, suggesting that similarities in gender, age, and education can enhance productivity. Wiersema and Bantel (1992) further underscores the importance of demographic homogeneity in fostering effective communication and team identity.

The Equity Theory proposed by Jackson et al. (1995) also emphasizes the role of perceived status differences within a team in shaping communication and resource sharing. Given these theoretical frameworks and the empirical model by Bowers et al. (2000), it is crucial to consider variables such as Gender, Age, and Education alongside Job Position. This comprehensive approach allows for a more robust understanding of project outcomes, enhancing the reliability of results and informing decision-making processes.

In Model 1, we examined the categorical variables of Gender, Age, Education, and Job Position via hierarchical regression. The model's findings confirm the Bivariate analysis finding that only Job Position is statistically significant in influencing Project Success. Furthermore, the model's predictive power is low, with an Adj. $R^2$ of 0.48. In Model 2, we incorporated SL with TI and TC and TI and TC in addition to the categorical variables. The addition of these variables increases the Adj. $R^2$ 60.08%, indicating a significant increase of 13.2% in explanatory power. Interestingly, in Model 2, JP fails to maintain a statically significant effect on project success. Rather, only SL, TC, and TI positively influence Project Success and support the study hypotheses.

In Model 3, three interaction effects are incorporated: SL and TI, TC and TI, and TC. The inclusion of SL and TI is premised on the proposition that servant leaders, by fostering a positive team climate, can elevate trust, cooperation, and motivation among team members, thus potentially enhancing Project Success. Concurrently, the SL and TC interaction is integrated based on a similar rationale. Additionally, the TI and TC interaction is included under the supposition that when team members harbour a strong sense of identity and belonging, they are more likely to align their aspirations and efforts toward project objectives. However, it is notable that these interaction effects do not yield

statistical significance, except SL and TI. Counter to initial expectations; this interaction is negatively associated with Project Success, indicating that the combination of SL and TI does not positively contribute to the project's success.

Model 4 demonstrates a three-way interaction involving Sl, TI, and TC. It is worth mentioning that the Adj. $R^2$ increases slightly from 0.608 (in Model 2) and 0.610 (in Model 3) to 0.614. However, the results suggest that it has a negative coefficient despite the significant interaction. This negative coefficient could be attributed to a complex

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| **Gender = male** | .092 | 0.036 | 0.048 | 0.047 |
| | (1.307) | (0.061) | (0.779) | (0.765) |
| **Age** | .010 | 0.026 | 0.030 | 0.022 |
| | (.241) | (0.037) | (0.818) | (0.607) |
| **Education** | .021 | 0.012 | 0.016 | 0.014 |
| | (.503) | (0.035) | (0.447) | (0.385) |
| **Job Position** | .400*** | 9.414E-5 | -0.028 | -0.040 |
| | (20.327) | (0.041) | (-0.597) | (-0.840) |
| **Servant Leadership (SL)** | | 0.241*** | 0.234*** | 0.254*** |
| | | (0.038) | (5.978) | (6.348) |
| **Team Identify (TI)** | | 0.203*** | 0.184*** | 0.227*** |
| | | (0.042) | (4.215) | (4.773) |
| **Team Climate (TC)** | | 0.359*** | 0.448*** | 0.457*** |
| | | (0.065) | (5.514) | (5.637) |
| **SL*TI** | | | -0.070* | -0.080 |
| | | | (-2.143) | (-2.431) |
| **SL*TC** | | | 0.035 | 0.020 |
| | | | (1.297) | (0.711) |
| **TI*TC** | | | 0.061 | 0.028 |
| | | | (1.634) | (0.699) |
| **SL*TI*TC** | | | | -0.032** |
| | | | | (-2.231) |
| **cons** | 3.769*** | 5.262*** | 5.307*** | 5.411*** |
| | (19.508) | (0.215) | (24.238) | (24.272) |
| **n** | 446 | 443 | 440 | 439 |


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| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| $R^2$ | .482 | .614 | .619 | .623 |
| Adj. $R^2$ | .478 | .608 | .610 | .614 |
| Std. Error | .71516 | .619 | .617 | .614 |
| VIF | 1.027 | 2.706 | 3.461 | 3.417 |

**Table 6.** Combined Table: Effects on Project Success

*Note: The t-statistics are presented below the coefficients. Asterisks indicate the coefficient significance level: * for 10%, ** for 5%, and *** for 1%.*

interplay between the variables where the combined effect of SL, TI, and TC does not align synergistically and may even counteract each other in certain contexts, leading to a decrement in Project Success. The negative sign could also reflect unforeseen moderating variables or interactions that attenuate the expected positive relationships among SL, TI, and TC. It is further suppositions that when individuals incorporate the values and beliefs of the group, such as SL's promotion of a serving culture, into their own identities, it can influence their behaviour and attitudes (Pratt, 1998). However, there may be conflicts and inconsistencies between servant leadership ideals and team identity in a heterogeneous group with disparate perspectives and approaches. These interactions are visualized in Figure 7 and Figure 8 of the Appendix.

In the regression analysis, the Variance Inflation Factor (VIF) values were scrutinized to ascertain the presence of multicollinearity among the variables encompassed in the four models. The literature posits that VIF values below 10 indicate the absence of multicollinearity (Senaviratna and A Cooray, 2019; Martens et al., 2020). The empirical findings reveal that all four models manifest VIF values below this threshold, implying the absence of any significant multicollinearity issues. Consequently, the regression analysis buttressing the positive impact of SL, TI, and TC on Project Success is fortified by the diminished correlation among the predictor variables within the models.

### *4.1.1. Binary Logistic Regression*

Hierarchical regression, a critical tool in model selection, often grapples with the challenge of accurately gauging success due to subjective metrics. This predicament can be navigated using Binary Logistic Regression, which evaluates the intricate interplay between predictor variables and binary outcomes, thereby enhancing precision in estimating success probabilities. To quantify project success, surrogate variables, represented on a refined 0-7 scale with four as the midpoint, have been introduced to bolster the analytical robustness, enabling clear differentiation of successful projects.

In our regression, we note that (*JP*) was significantly influential on project outcomes as demonstrated by a *p*-value < 0.05 when assessed without SL, TI, and TC. Incorporating *JP* as a control variable augments our understanding of its role in the interplay between main variables and project outcomes. Despite the preponderance of *JP*, it is vital to recognize the influence of other variables such as Project Characteristics.

Our Binary Logistic Regression analysis, presented in Table 7, reveals that the model holds a Nagelkerke $R^2$ value of 0.588, indicative of its significant explanatory capacity in mediating and assessing a wide range of variables influencing project outcomes. In the analysis, while categorical variables exhibit no significant impact on Project Success, three key variables – Servant Leadership (*p value* < 0.01), Team Identity (*p value* < 0.03), and Team Climate (*p value* < 0.08) – are found to substantially influence project outcomes. The positive interactions among these variables imply a collective synergy that enhances Project Success. These observations are congruent with Model 2 of the Multivariable Regression analysis, which bolsters the consistency of the Binary Logistic Regression results and corroborates the initial hypothesis (H1) posited in the study.

Moreover, despite the non-significance of Job Position, it is noteworthy that specific roles, namely the Chief Technology Officer (CTO) and Project Management, appear to impact project success negatively. Such adverse effects may stem from the CTO's potential misalignment with project goals or ineffective communication leading to resource discrepancies and from inefficiencies in Project Management such as poor risk handling. The heightened responsibilities and decision-making authority attributed to these roles could amplify the consequences of any shortcomings. Additionally, the organizational culture, if not conducive to collaboration, could further hinder the positive contributions of these roles. Concurrently, a Chi-square test statistic of 7.46 with 8 degrees of

freedom and a p-value of 0.488, exceeding the standard 0.05 threshold, lends insufficient evidence against the null hypothesis, attesting to the model's excellent fit to the data.

| Variable | Coefficient |
|---|---|
| **ProjectCharacteristic = Sustainable & Affordable Construction** | -1.086 |
| | 0.53 |
| **JobPosition = Project Management Office** | -0.142 |
| | 0.797 |
| **JobPosition = Project portfolio manager** | -0.448 |
| | 0.499 |
| **JobPosition = Chief Technology Officer** | -0.433 |
| | 0.489 |
| **JobPosition = Volunteer Team member** | 0.236 |
| | 0.553 |
| **JobPosition = Team leader/Project Manager** | 0.116 |
| | 1.186 |
| **JobPosition = other** | -1.247 |
| | 1.229 |
| **Servant Leadership** | 0.654*** |
| | 0.181 |
| **Team Identity** | 0.655*** |
| | 0.22 |
| **Team Climate** | 1.077*** |
| | 0.405 |
| **Constant** | -11.47*** |
| | 2.702 |
| **Log-likelihood** | 326.409 |
| **Cox & Snell $R^2$** | 0.424 |
| **Nagelkerke $R^2$** | 0.588 |

| Variable | Coefficient |
|---|---|
| **Hosmer and Lemeshow $\chi 2$** | 7.456 |
| **Hosmer and Lemeshow Sig.** | 0.488 |

**Table 7.** Effects on Project Success

*Note: The t-statistics are presented below the coefficients. Asterisks indicate the coefficient significance level: * for 10%, ** for 5%, and *** for 1%.*

In this analysis, categorical variables within the model demonstrate no significant impact on Project Success. Nevertheless, three essential variables – Servant Leadership (*p value* < 0.01), Team Identity (*p value* < 0.03), and Team Climate (*p value* < 0.08) – significantly influence project outcomes, underscoring their crucial role in assessing project feasibility. Additionally, observed positive interaction among these variables suggests collective impact enhancing Project Success. These findings align with Model 2 of the Multivariable Regression analysis, validating the consistency of the Binary Logistic Regression results and thereby reinforcing the initial hypothesis (H1) put forth in the study.

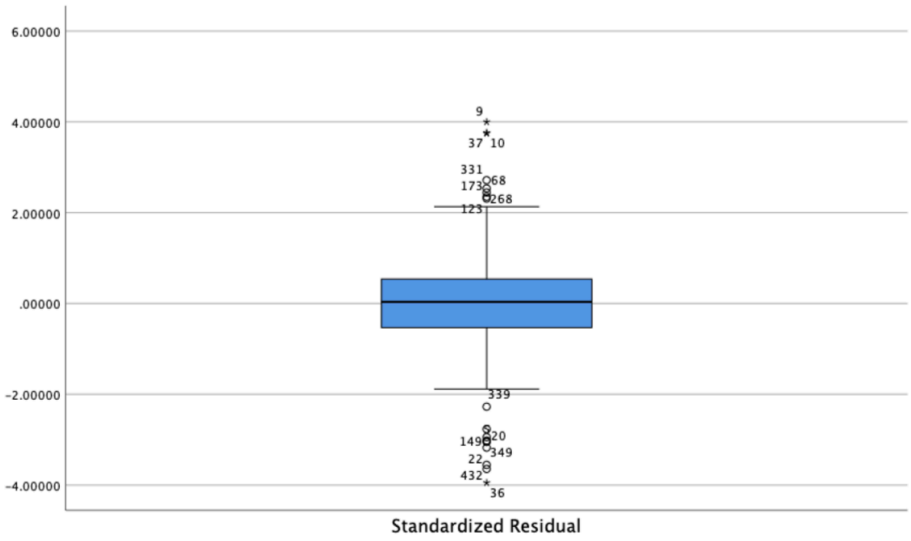


**Figure 5.** Box plot of Project Success


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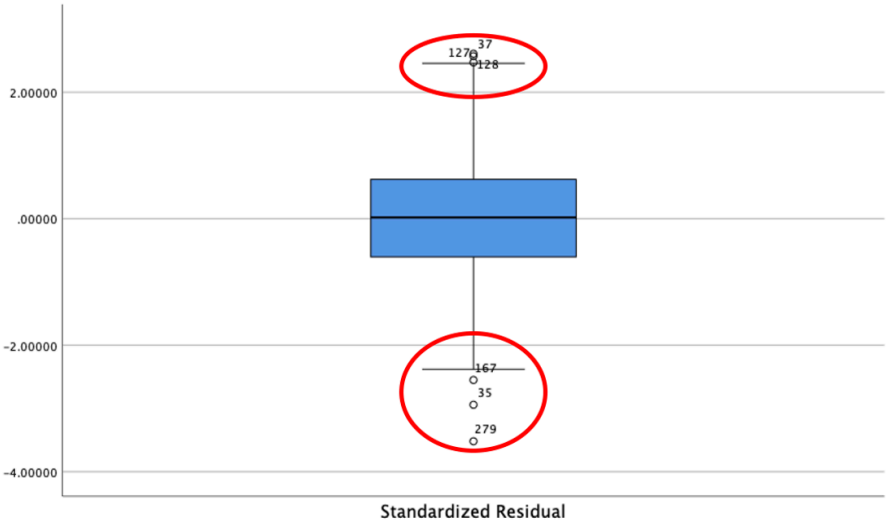


**Figure 6.** Box plot of Project Success after Remedies

## *4.2. Outliers*

In pursuit of further insights into the determinants of Project Success, we scrutinize the residuals to discern disparities between observed and predicted values, in addition to examining outliers (see Table 8). The presence of substantial standardized residuals intimates that our model might be overlooking some facets of the intrinsic relationship. Consequently, standardizing the predicted value proves instrumental in streamlining the interpretation by establishing a reference point and elucidating predicted values' relative magnitude and significance. Complementing this analysis, Table 9 exhibits the outcomes of the Kolmogorov-Smirnov and Shapiro-Wilk tests, which signify a conspicuous deviation from normality in the standardized residuals, as evinced by *p*-values below 0.001. This deviation contravenes the normality postulate, thereby hinting at latent intricacies in the underlying associations or the existence of outliers. We deploy data transformations and robust statistical methodologies to surmount this non-normality and bolster the analysis's robustness.

| | Minimum | Maximum | Mean | Std. Dev |
|---|---|---|---|---|
| Predicted Value | 3.037 | 6.564 | 5.402 | 0.781 |
| Residual | -2.427 | 2.459 | 0.000 | 0.607 |
| Std. Predicted Value | -3.028 | 1.488 | 0.000 | 1.000 |
| Std. Residual | -3.947 | 4.000 | 0.000 | 0.988 |

**Table 8.** Standardization and predicted values

*Note: Dependent variable: Project Success*

| | Kolmogorov-Smirnov | | | Shapiro-Wilk Test | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| **Standardized Residual** | .067 | 451 | <.001 | .962 | 451 | <.001 |

**Table 9.** Kolmogorov-Smirnov and Shapiro-Wilk Normality Tests

*Note: Test variables: Standardized Residual*

## *4.3. Remedies*

The dataset, initially comprising 451 observations, was pruned to 435 after employing outlier remediation techniques, suggesting the identification and exclusion of certain data points as outliers. The post-remediation Box-Plot (Figure 6) and Q-Q Plot (omitted for conciseness) serve as graphical instruments to gauge data quality and distribution attributes. While a few outliers persist, their diminution is markedly conspicuous compared to the original dataset. This affirms that the data cleansing protocol efficaciously pinpointed and tackled anomalous values, yielding a more streamlined dataset. Consequently, the Box-Plot conveys that the refined dataset is now amenable to incisive predictions and rigorous statistical scrutiny (see Figures 5 -6). Descriptive statistics of the updated dataset are presented in Table 10.

| | N | Mean | SD |
|---|---|---|---|
| **ProSuc** | 435 | 5.4355 | 0.91634 |
| **Gender=male** | 435 | 0.6276 | 0.48400 |
| **Education** | 435 | 3.20 | 0.843 |
| **Age** | 435 | 3.07 | 0.797 |
| **JobPosition** | 435 | 3.73 | 1.691 |
| **SL** | 435 | 0.0000 | 1.10171 |
| **TI** | 435 | 0.0000 | 1.00065 |
| **TC** | 435 | 0.0000 | 1.01740 |
| **SL*TI** | 435 | 0.6690 | 1.57334 |
| **SL*TC** | 435 | 0.7894 | 1.56717 |
| **TI*TC** | 435 | 0.7000 | 1.37924 |
| **Sl*TI*TC** | 435 | -0.4192 | 3.86221 |

**Table 10.** Descriptive statistics

Following the implementation of measures to address the presence of outliers, the initial models were re-evaluated to assess their robustness. For Model 1, it was observed that the initially significant variables retained their significance, and the model fit exhibited a marginal improvement, as evidenced by an increase in the $R^2$ value from 0.48 to 0.55 after removing outliers. The regression results reflect the moderate explanatory capability of the control variables in isolation; however, no novel insights were gleaned from this adjusted model. Turning attention to Model 2, the variables SL, TI, and TC retained their marked significance in forecasting Project Success and displayed an enhanced Adjusted $R^2$ value of 0.700 compared to the previous 0.614. The increment in the proportion of variance explained by the dependent variable indicates an improved ability to discern the

fundamental patterns inherent in the dataset, thereby reaffirming the substantial contribution of the primary variables in elucidating contributors to success.

Model 3 incorporates two-way interaction terms, facilitating more sophisticated scrutiny of variable interrelationships and, consequently, yielding a more profound understanding of factors influencing the dependent variable. Notably, the interaction term between TI and TC emerged as positive and significant, which was not the case in the preliminary models. Furthermore, Model 4, which encompasses control variables, main effects, two-way interactions, and threeway interactions, accounts for 70.7% of the project success variance. The assimilation of three-way interaction terms captures a higher level of intricacy in project success, thereby amplifying the model's explanatory power. However, it is noteworthy that the three-way interaction among SL, TI, and TC is negative and exhibits marginal statistical significance. This suggests that under certain configurations of these variables, there is an attenuated likelihood of project success.

## 5. Discussions

The findings of this study contribute to a greater comprehension of the factors that influence successful project outcomes within the context of NGOs. The study's primary objective was to examine the effect of servant leadership on project success, and the findings provide strong evidence of a positive relationship. These findings are consistent with empirical research conducted by Ellahi et al. (2022), Irving and Longbotham (2007), and Gotsis and Grimani (2016), thereby highlighting the significance of servant leadership in the NGO context.

It has been demonstrated that SL practices, such as empowering and supporting team members, nurturing a sense of ownership, and encouraging their personal and professional development, positively impact the success of a project. By fostering an environment that encourages team members' devotion, motivation, and active participation, servant leaders improve the project performance of NGOs. As SL promotes effective communication, knowledge sharing, and collaborative problem-solving, it is essential for project management in the context of non-governmental organizations (Gotsis and Grimani, 2016)

Transitioning to an examination of the second hypothesis, the inquiry into the ramifications of TI on the nexus between SL and project success elicited notable findings. The empirical data suggests that a potent TI can attenuate the positive correlation between SL and project efficacy. Within contexts where team members manifest an elevated sense of unity and common objectives, there tends to be a

bias towards relying on collective identity and group norms as the compass for their behaviour, contributing to project success. This phenomenon thereby lessens the influence of individualistic SL traits. This counterintuitive outcome emphasizes the complicated interplay between TI and SL, mandating further scholarly explorations to demystify the essential mechanisms and ascertain the boundary conditions pertinent to this interrelationship.

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| (Constant) | 3.793*** | 5.358*** | 5.384*** | 5.484*** |
| | (22.342) | (29.569) | (29.433) | (29.484) |
| Gender=male | 0.038 | 0.002 | 0.015 | 0.013 |
| | (0.612) | (0.046) | (0.289) | (0.259) |
| Education | 0.042 | 0.025 | 0.034 | 0.033 |
| | (1.162) | (0.853) | (1.147) | (1.104) |
| Age | -0.003 | 0.008 | 0.013 | 0.006 |
| | (-0.068) | (0.246) | (0.438) | (0.196) |
| JobPosition | 0.400*** | -0.007 | -0.037 | -0.049 |
| | (22.677) | (-0.215) | (-0.957) | (-1.260) |
| SL | | 0.279*** | 0.271*** | 0.290*** |
| | | (8.707) | (8.321) | (8.729) |
| TI | | 0.208*** | 0.207*** | 0.245*** |
| | | (5.750) | (5.555) | (6.136) |
| TC | | 0.357*** | 0.436*** | 0.445*** |
| | | (6.333) | (6.430) | (6.597) |
| SL*TI | | | -0.043 | -0.054* |
| | | | (-1.590) | (-1.987) |
| SL*TC | | | 0.006 | 0.013 |
| | | | (0.239) | (0.515) |
| TI*TC | | | 0.080* | 0.053 |
| | | | (2.479) | (1.562) |
| SL*TI*TC | | | | -0.031* |
| | | | | (-2.545) |
| n | 430 | 427 | 424 | 423 |


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| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| F Change | 128.948 | 77.204 | 2.371 | 6.475 |
| $R^2$ | 0.545 | 0.705 | 0.71 | 0.71 |
| Adj. $R^2$ | 0.541 | 0.700 | 0.703 | 0.707 |
| Std. Error | 0.621 | 0.502 | 0.499 | 0.496 |
| F-Change | 128.948 | 77.204 | 2.371 | 6.475 |
| Sig.F-Change | <.001 | <.001 | 0.070 | 0.011 |

**Table 11.** Unstandardized Coefficients

*Note: The t-statistics are presented below the coefficients. Asterisks denote the coefficient significance level: * for p¡0.05, ** for p¡0.01, and *** for p¡0.001.*

Moreover, subsequent to addressing outlier data without exclusion, there was a concrete fortification in the statistical significance of the correlation between SL and project success, thereby bolstering Hypothesis 2. Moving to the third hypothesis, the emphasis was centred on probing the effect of TI on project success. The empirical evidence denotes that the salutary influence of SL on project performance is conspicuously magnified under conditions of high TI. A harmonious team environment, characterized by trust, mutual support, and candid communication, in concert with SL, engenders collaboration and synergistic cooperation amongst team members indispensable elements for project realization. Furthermore, when synergized with a propitious team climate, a fraction of TI engenders an ambience conducive to efficacious communication and informed decision-making, ultimately resulting in enhanced project deliverables. This concordance with antecedent research is corroborated by Nauman et al. (2022) and Yoshida et al. (2014).

# 6. Contributions. Limitations and Future Research

## *6.1. Theoretical Contribution*

This study delves into the theoretical aspects of achieving successful project outcomes for NGOs, encompassing various factors such as team dynamics, leadership selection and assessment, organizational culture, project management strategies, and employee retention. A key determinant of project success lies in fostering a robust team environment characterized by an inclusive and supportive culture that promotes trust and open communication (Martens and Pham, 2021). This inclusive culture cultivates a shared purpose and identity among team members, fostering collaboration and facilitating efficient knowledge exchange and effective problem-solving. Crucially, leadership plays a vital role in creating such an environment, with SL principles being particularly instrumental. Integrating criteria for SL into the selection process ensures the appointment of leaders who can foster a conducive team climate. Moreover, providing training opportunities to potential and current leaders can further enhance their servant leadership skills, thereby contributing to the overall success of the project execution.

The study also advises the deep integration of servant leadership principles into an NGO's organizational culture and values. This shared understanding promotes a culture that champions these principles, increasing the likelihood of project success. Project managers should optimally leverage servant leadership behaviours, particularly in high team climate and low team identity contexts. This could involve active listening, empowering team members, providing resources, and promoting collaboration. Lastly, a supportive team environment and servant leadership behaviours correlate with employee satisfaction, contributing to retention and fostering a stable, productive team, leading to successful project outcomes.

## *6.2. Practical Contribution*

This study delivers crucial insights to NGOs for achieving successful project outcomes, emphasizing team dynamics, leadership development, organizational culture, project management strategies, and employee retention. It stresses the need for a robust team environment characterized by supportiveness, inclusiveness, and trust. Shared purpose and identity among team members boost collaboration, facilitating efficient knowledge exchange and effective problemsolving, which consequently improve project outcomes.

The role of servant leadership in cultivating such an environment is pivotal. By integrating servant leadership criteria into the selection process, NGOs can select leaders adept at creating a conducive team climate. Continuous training and evaluation based on the leaders' ability to foster a healthy team climate can further enhance project success. This study also suggests incorporating servant leadership principles into the NGO's organizational culture and values, expressed in mission statements and cultural norms. Concurrently, project managers should leverage servant leadership behaviours optimally, particularly under high team climate and low team identity conditions. Such practices include active listening, empowering team members, and promoting open communication and collaboration. Ultimately, a supportive team environment and servant leadership behaviours lead to higher employee satisfaction, reducing turnover rates and improving overall project success.

### *6.3. Limitations and Future Research*

The document under review employs a quantitative questionnaire to gather data on a range of variables, including Servant Leadership, Volunteerism, Team Identity, Team Climate, and Project Success. While this methodological approach can yield valuable data, it is not without limitations. Specifically, the use of questionnaires can introduce response bias and common method bias. Despite steps taken to mitigate these issues, the potential for biases necessitates caution in generalizing the results. Moreover, the use of a 7-point Likert scale for different groups of items may introduce variability in the interpretation of responses, further complicating the analysis.

The study's scope is defined by the success criteria developed by Ika (2012), which are specific to development projects. While these criteria are undoubtedly relevant to the context of the study, future research could benefit from considering additional factors. Such factors may include relevance, effectiveness, efficiency, impact, and sustainability for the evaluation of project success factors in NGO settings.

Finally, the document's findings are based on responses from NGOs operating across various regions. However, the generalizability of these findings to other contexts or populations remains unclear. The document also notes a multigroup analysis that indicates similarities between volunteer workers and paid workers only for the effect of servant leadership and team climate on project success. This observation suggests potential limitations in the applicability of the findings to different types of workers. Therefore, while the study provides valuable insights into the relationships between the

variables under investigation, these limitations should be taken into account when interpreting and applying the findings.

Future research could contribute to the advancement of knowledge via an expansion of the success criteria to encompass relevance, effectiveness, efficiency, impact, and sustainability, thereby offering a more comprehensive evaluation of project success. Additionally, it underscores the need to address method biases in social science research, drawing on the recommendations of Eva (2019), to enhance the validity of findings. Lastly, the potential for further exploration of the differences and similarities between volunteer and paid workers, particularly in relation to the effects of servant leadership and team climate on project success. These areas of future research could provide more nuanced insights into the factors that contribute to project success in NGOs

This document contains 91 references.

# 7. Appendix

| Dependent Variable | Questionnaire Items |
|---|---|
| Project Success<br>Ika (2012) | (1) Comply with the budget<br>(2) Comply with the expected time<br>(3) Comply with the quality<br>(4) Obtain long-term project impact<br>(5) Stakeholder/partner involvement<br>(6) Ownership extension to the local community<br>(7) Monitoring and reporting to stakeholders<br>(8) Economic sustainability after the project end<br>(9) Satisfaction of the local |
| **Independent Variable** | **Questionnaire Items** |
| **Servant Leadership**<br>Liden et al. (2008a) | (1) My manager can effectively think through complex problems<br>(2) My manager has a thorough understanding of our organization and its goals<br>(3) My manager provides me with work experiences for skill development<br>(4) My manager holds high ethical standards<br>(5) My manager is always honest<br>(6) My manager would not compromise ethical principles for success<br>(7) My manager values honesty more than profits<br>(8) I would seek help from my manager for personal problems<br>(9) My manager cares about my well-being<br>(10) My manager emphasizes the importance of giving back to the community<br>(11) My manager is interested in helping people in our community<br>(12) My manager is involved in community activities<br>(13) I am encouraged by my manager to volunteer in the community |
| **Team Identity**<br>Doosje et al. (1995)<br>Luhtanen and Crocker (1992)<br>Mael and Tetrick (1992) | (1) I see myself as a member of this team<br>(2) I am pleased to be a member of this team<br>(3) I feel strong ties with members of my team<br>(4) identify with other members of my team<br>(5) I feel proud to be a member of the project team<br>(6) The success of the project team is also my success |
| **Team Climate**<br>Doosje et al. (1995)<br>West and Altink (1996)<br>Figl and Saunders (2011) | (1) We always look for different interpretations and perspectives to confront a problem<br>(2) In our project team, we criticize each other's work in order to improve team effectiveness.<br>(3) In our project team, we are prepared to reflect on the way we act.<br>(4) In our project team, we engage in evaluating our weak points in attaining effectiveness.<br>(5) In our project team, we openly challenge each other's opinions.<br>(6) In our project team, we reassess any proposed solution. |
| **Socio-demographic** | (1) Age<br>(2) Education<br>(3) Job tenure<br>(4) Project Size<br>(5) Team size<br>(6) Project Type<br>(7) NGO type (international or local) |

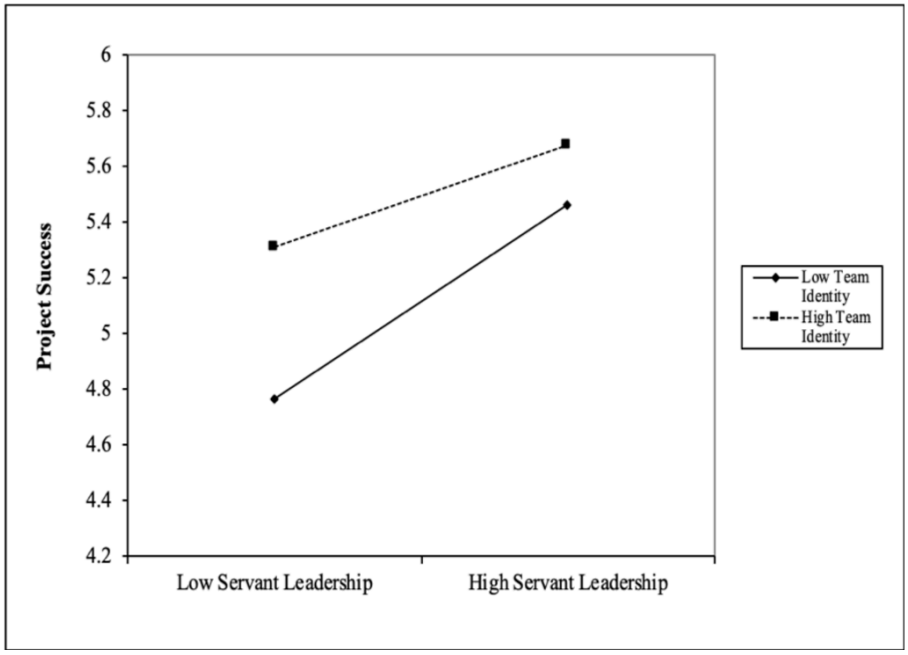


**Figure 7.** Two-way Interactions

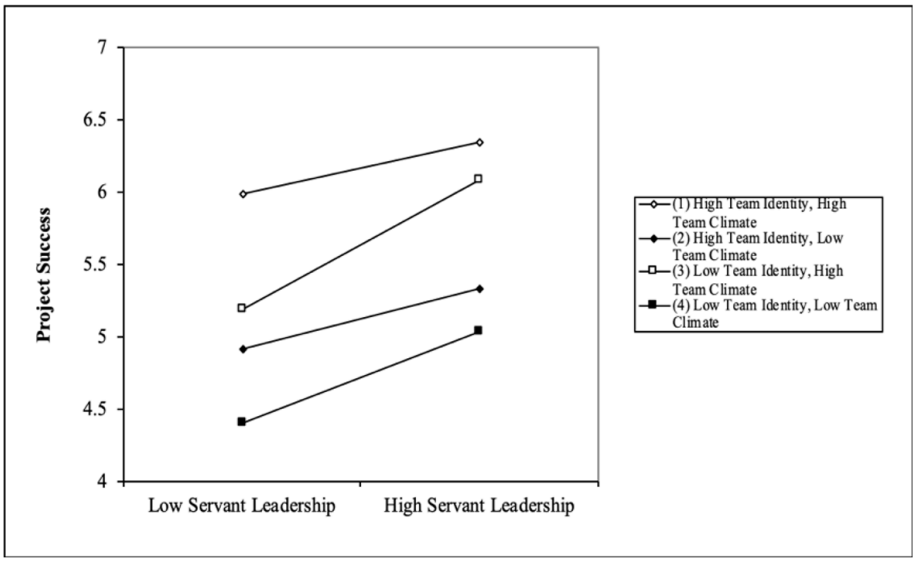


**Figure 8.** Three-way Interactions


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