Role of Servant Leadership and Project Management Success Factors

Atiya Shahbaz

University of Lahore, Pakistan, Rana Zain Ul Abidin, University Utara Malaysia

Abstract: This nonexperimental explanatory study was designed to investigate the relationship between two constructs, servant leadership and project management success, and their various dimensions. The sample included project management practitioners (managers of projects, programs, or portfolios) with experience in project management and servant leadership, over the age of 18, and without specificity to gender, ethnicity, race, education, income, certification, or membership in project management organizations. The two survey instruments consisted of the SLP-R, 62 questions, self-administered, utilizing a 7-point Likert scale and the PIP, 100 questions, self-administered, utilizing a 10-point Likert scale to record responses. The SLP-R survey questions were self-assessed leadership questions related to participants managing their teams. The PIP survey contained 10 sections of were self-assessed questions related to different phases of projects the participants managed. Seventy-six usable surveys were used. The examination of the constructs included Pearson's and Spearman rho correlations along with stepwise multiple regression to determine the explanatory relationship of continuous variables. Results indicated that the courageous leadership dimension of servant leadership had a significant correlation with the client consultation and technical tasks dimensions of project management success. The results aligned with previous studies that purport a natural connection between servant leadership and project management.

Keywords: Project management, servant leadership, project managers, Pakistan

INTRODUCTION

Scholars of leadership studies and project management success indicate that leadership and its role in project outcomes can be decisive in enhancing project management success (Holzmann & Mazzini, 2020; Krog & Govender, 2015). The problem is that according to Ouzer (2019), only 58% of organizations fully comprehend the importance of project management. Projects fail more frequently than they succeed within organizations (Krog & Govender, 2015); indeed, a recent report describes their dismal failure rate (Standish Group, 2019). Because projects are both organization- and situation-specific, then tend to be unique, thereby contributing to the comparatively higher failure rate when a strategy that works for one project may not be applicable to another (Khan, Long, & Iqbal, 2015). When projects fail, leaders are held responsible; in a related way, the risks for project failure increase without appropriate leadership (Maqbool et al., 2017). Project manager leadership skills represent a critical success factor for advancing projects (Frefer, Mahmoud, Haleema, & Almamloo, 2018). Accordingly, researchers are becoming increasingly interested in specific success criteria for projects (i.e., cost, time, and quality) and critical success factors that contribute to both project success and project management success (Frefer et al., 2018).

According to the PMI (2017), approved project deliverables that are within budget and implemented on time represent a benchmark for project management success. By this definition of project success, however, recent research surveys have shown significant rates of project failure (PMI, 2018). According to Billows (2019), projects fail at a rate of 70% within organizations. More significantly, only 16.2% of projects were deemed to be successful as judged by (a) being completed on time and budget, and (b) with all the promised functionality (Standish Group, 2019). A majority of projects (52.7%) were over budget, went over the estimated time, or lacked the promised functionality (or all of the three), leaving 31.1% to be classified as failed (Standish Group, 2019). However it is defined, project failure has long represented a serious and costly concern for organizations. Failure rates to this extent reinforce why researchers continue to be interested in project failure along with understanding the underlying relationships which led to the failure (Pflügler, Malzer, Jäschke, Wiesche, & Krcmar, 2018).

While researchers have identified a number of leadership styles and models, servant leadership, a unique leadership approach, which focuses on serving and the need of others first, has received a great deal of attention in the scholarly literature for over four decades (Linuesa- Langreo, Ruiz-Palomino, & Elche-Hortelano, 2017). A guiding premise of servant leadership is that the leader focuses on the development of followers rather than self, while eliminating obstacles or difficulties that may hinder the growth and success of followers (Greenleaf, 1977). There appears to be a natural connection between servant leadership (i.e., influenced by the desire to serve others, such as the community and the organization) and the ability of the project manager to envision the relationship of the project to the community and the industry (Hatherill, 2017). Research studies on servant leadership and project management success indicate that servant leadership could assist project managers overcome challenges and achieve project success (Krog & Govender,

2015).

The relationship between servant leadership characteristics and project management abilities may lead one to believe that project managers have more in common with servant leaders than more traditional leaders (Hatherill, 2017). For example, servant leaders strive to empower their teams for success; similarly, project managers who empower their teams are morelikely to benefit from project success (Hatherill, 2017). Hatherill (2017) stated that a successful project manager must first possess strong influential skills with an emphasis on building teams effectively, which are characteristics of servant leadership. Although studies indicate that project managers who employ servant leadership are better able to assist their employees in achievingsuccessful project management outcomes, empirical evidence regarding the explanatory relationship between servant leadership and project management success is under-reported, justifying the need for this study.

Within the stream of research on leadership and project management success, scholars consider leadership to be the catalyst that ignites alliance and participation to achieve project management success (Martin & Edwards, 2016). Success in projects is much more complicated than meeting costs, specifications, and deadlines (Montequín, Balsera, Fernández, & Fernández,2018). Parallel to the knowledge required of the project manager with respect to project-specific critical success factors, leadership style also has considerable importance (Blaskovics, 2016). According to Martin and Edwards (2016), successful leadership within project-based organizations continues to be a challenge as demonstrated by time and cost overruns and incomplete projects, all of which are exacerbated by a lack of understanding of leadership stylesand a muddled approach to leadership. Indeed, as research shows, projects have specific criticalcharacteristics that determine the appropriate style to manage them successfully (Montequín et al., 2018).

Researchers have stressed the need to clarify which style of leadership influences projectmanagement outcomes (Aga, 2016; Aga, Noorderhaven, & Vallejo, 2016; Ding, Li, Zhang, Sheng, & Wang., 2017). For example, autocratic project managers must often make quick decisions in times of stress and when facing firm deadlines for completing tasks. However, this leadership style may stifle creativity for problem-solving due to the manager's authoritarian nature, resulting performance deficits, worker resentment, and even rebellion or high turnover (Martin & Edwards, 2016). While the democratic project leader consults the project team and considers their suggestions, the final decision still lies with the project leader. Although this participative leadership style enhances goal commitment with a sense of ownership whereby theproject team feels valued and produces a higher quality of work, this leadership style runs the risk of decreasing work output (Martin & Edwards, 2016). Meanwhile, laissez-faire leaders tendto have far less input in the decision-making process, while still ultimately responsible for project outcomes (Martin & Edwards, 2016). Martin and Edwards (2016) cited laissez-faire leadership style as facilitating the development of critical thinking skills and team problem- solving skills; on the downside, the absence of focused leadership can result in reduced productivity, increased costs, and failure to meet deadlines.

A review of the literature identified leadership styles and traits as critically impacting the success or failure of project management (Martin & Edwards, 2016; Mughal, Bahaudin, & Salleh, 2019). However, there is a lack of empirical studies showing the direct relationship between the leadership style of project managers and the impact that it has on project management success (Aga, 2016; Aga et al., 2016; Ding et al., 2017). In particular, the literaturelacks sufficient empirical documentation as to how servant leadership impacts this relationship. When compared with other leadership styles, servant leadership places a higher priority on the needs and input of team members (Cater & Beal, 2015). Although the concept of being both leader and servant simultaneously seems difficult to grasp, scholars continue to explicate the positive effects associated with this leadership style in the areas of employee satisfaction and organizational profits (Lorence, 2017). Therefore, this study sought to address the identified gapin scholarship by contributing to the growing body of empirical evidence regarding the explanatory relationship between servant leadership and project management success. The outcomes of this study could help broaden and deepen the dialogue among scholars and practitioners, serve as a means for future research, and expand servant leadership theory through this exploration of the explanatory relationship between the dimensions of servant leadership andproject management success.

THEORETICAL BACKGROUND

In essence, servant leadership theory (SLT) is a philosophical theory that merges the concepts of leadership and servanthood (Chow, Salleh, & Ismail, 2017). SLT essentially epresents the only leadership theory that is built on the leader being a servant first (Carroll & Patterson, 2014). Servant leadership theory emphasizes that leaders must desire to serve their followers first based on concepts of morality and humanity (Greenleaf, 1977). Rachmawati andLantu (2014) stated that servant leaders view themselves as stewards, derived from the Greek word *oikonomia*, which translates to household manager. SLT transcends self-interest to serve others, emphasizing virtues such as kindness, humility, honesty, respectfulness, commitment, and patience (Chow et al., 2017). Moreover, SLT is based upon the premise that leaders rely onone-on-one communication to understand the abilities, needs, desires, goals, and potential of their followers to bring

out their best (Liden, Wayne, Zhao, & Henderson, 2008).

Therefore, servant leadership theory (as illustrated in Figure 1), viewed through a positivist lens that relies on scientific evidence to reveal knowledge and the true nature of a phenomenon (Hasan, 2016), served as the theoretical foundation for this study. Moreover, the theoretical foundation for this research study relied on the premise that an organization with a project management division needs to understand the relationship between servant leadership and project management success. The findings of this study examining the extent to which the dimensions of servant leadership and project management are related could contribute to new knowledge about these correlations, as well as suggest new applications for servant leadership inleadership and project management not previously examined.
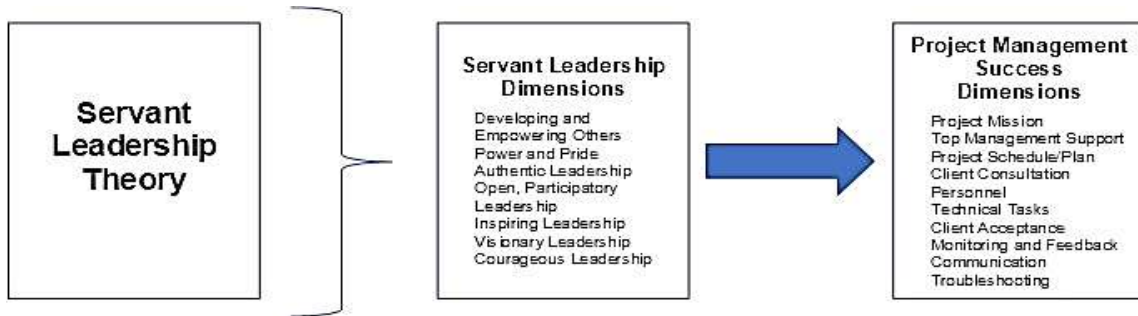

Figure 1. Theoretical foundation, illustrating the relationship between the independent anddependent variables for this research study.

Servant leadership and project management success

Krog and Govender (2015) contributed to the leadership literature by examining the influence of servant leadership traits (altruistic caring, wisdom, emotional healing, persuasive mapping, and organizational sponsorship) on the trust, commitment, and innovative behaviors ofemployees. Their findings support that altruistic caring, emotional healing, and persuasive mapping should be recognized as vital tools to influence the innovative behaviors, trust, and commitment of employees in order to help them feel empowered (Krog & Govender, 2015). In suggesting implications for practitioners, Krog and Govender (2015) stated that project leaders who adopt and display the servant leadership behaviors of altruistic caring and persuasive mapping leadership will ultimately contribute to project success through employeeempowerment.

Yousaf (2018) added to the project management literature by integrating servant leadership theory and a team-building model in promoting project success. The researcher detailed the positive correlation between servant leadership and project success, with team- building mediating the relationship between the two variables. Yousaf (2018) also reported howtrust, a significant component of servant leadership, will strengthen the relationship between servant leadership and team building with far-reaching implications for organizational success.

Nauman et al. (2019) extended the project management literature by evaluating the effects of servant leadership on project success. The researchers developed a parallel mediation model involving two mechanisms whereby servant leadership influences project success: work engagement and project work withdrawal (Nauman et al., 2019). Additionally, Nauman et al. (2019) contributed to the application of social exchange theory by explaining how the leadershipbehaviors of managers influence followers to accomplish positive project outcomes. The results reported by Nauman et al. (2019) could inspire interest among project management practitioners in servant leadership as a viable leadership style for generating positive project outcomes.

Another benefit of this leadership style is that it establishes a serving culture that encourages followers to display servant leadership (Liden et al., 2014). This cascading effect could be beneficial with more complex projects that tend to involve additional hierarchy levels and moreinformation asymmetry between managers and followers (Nauman et al., 2019).

Harwardt (2020) added to the project management literature by documenting the positiveimpacts of dimensions of servant leadership on the success dimensions of IT projects. Specifically, Harwardt (2020) confirmed that (a) leader authenticity was positive correlated with project management success and result success; (b) accountability influenced project management success, perception success, and result success; and (c) forgiveness influenced result success. These factors could eventually contribute to improved project implementation and outcomes beyond the IT realm in equipping project managers with servant-leadership-based tools to use towards the promotion of successful project-based outcomes (Harwardt, 2020).

Research Design

Examined through a positivist lens, a quantitative, nonexperimental explanatory designwas used to study the relationship between dimensions of servant leadership (the independent variables) and the dimensions of project management success (the dependent variables, which isillustrated in Figure 2. The theoretical foundation for this study was servant leadership theory, which merges the concepts of leadership and servanthood (Chow et al., 2017) and emphasizes that leaders will naturally wish to serve their followers first based on concepts of morality and humanity (Greenleaf, 1977). To answer the research questions, an explanatory design was used to determine the extent of the relationships among variables under investigation (Watson, 2015),which aligned with the main research question.
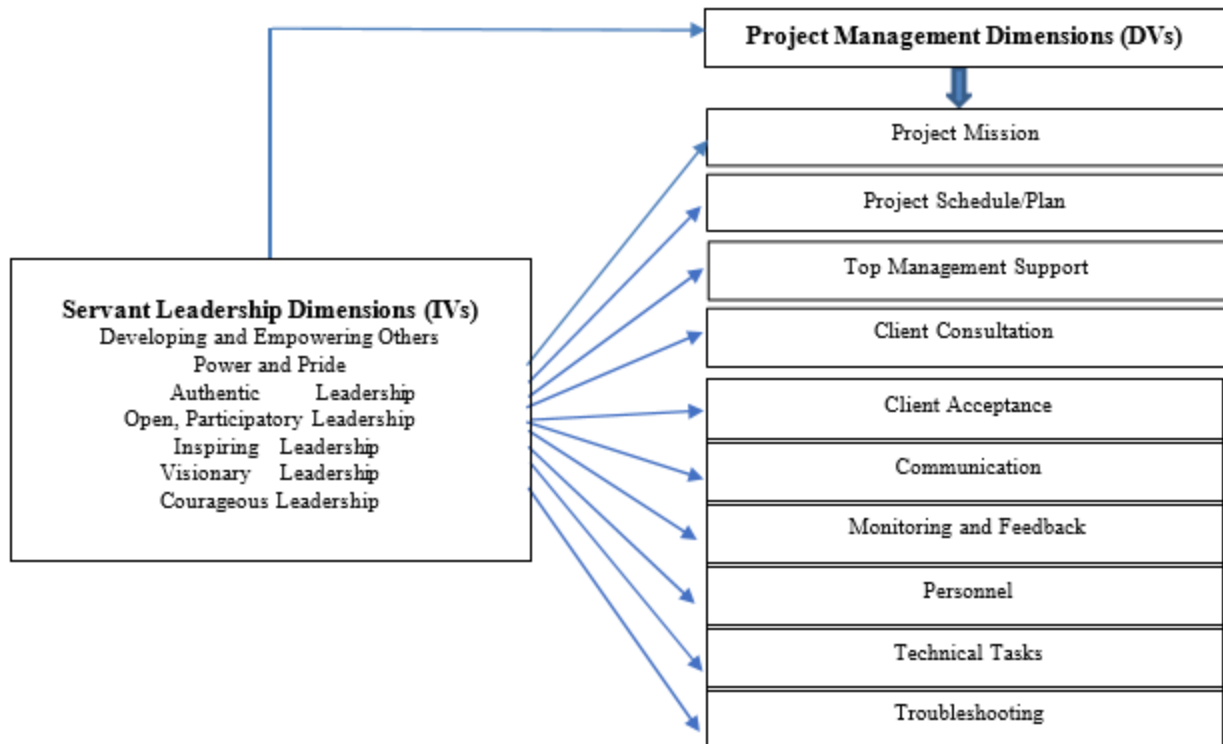
Figure 2. Relationship between the independent and dependent variables in this study.

Target Population and Sample

The study population for this investigation was project management practitioners working in project-based organizations in the Pakistan with membership in the SurveyMonkey Audience database. The makeup of the population included managers of projects, programs, or portfolios over the age of 18 without specificity to gender, ethnicity, race, education, income, certification, or membership in project management organizations such as the Association for Project Managers (APM), the Project Management Institute (PMI), or the International Project Management Association (IPMA). SurveyMonkey Audience has over 17 million active members. The sample was drawn from the four provinces of Pakistan. The sample of project management practitioners was randomly identified based on specific inclusion and exclusion criteria using SurveyMonkey's unbiased audience panel. This sample included individuals who met the following inclusion criteria: (a) employed as a project management practitioner in project-based environments and who managed projects at the time of the survey, (b) over the age of 18; and (c) be able to read and understand the English language. The criteria for eliminating respondents included those not currently managing projects, those under the age of 18, and individuals who declined to read and sign the participant consent form. The sample also excluded project management practitioners not affiliated with the SurveyMonkey Audience database.

RESULTS

Descriptive Statistics of Variables

To test this study's hypotheses, descriptive statistics for the seven servant leadership dimensions and the ten project management success dimensions were computed only for the cases that were not excluded as outliers in the subsequent analyses used to test this study's hypotheses. These statistics are presented in Table 1. The range of scores on three of the seven servant leadership factors was less than one scale interval out of the seven intervals that the scaleencompassed. This degree of range restriction on these factors reduced their likelihood of exhibiting significant relationships with the project management success dimensions. The mean of the power and pride, servant leadership dimension was substantially lower than any of the other servant leadership dimensions. In fact, paired *t*-tests revealed that the mean of this dimension was significantly lower than that of any of the other six servant

leadership dimensions. Similarly, the mean of the technical tasks dimension of project management success was significantly lower than eight of the other nine project management success dimensions. The means of the other nine project management success dimensions did not differ significantly from each other.

Table 1: Descriptive Statistics for the Servant Leadership and Project Management

Group	Dimension	N	Minimum	Maximum	M	SD
Servant Leadership	Developing and Empowering Others	75	6.19	7	6.83	.222
	Power and Pride	76	1	7	3.35	1.938
	Authentic Leadership	75	6.45	7	6.93	.135
	Open Participatory Leadership	68	6.8	7	6.97	.070
	Inspiring Leadership	73	5.86	7	6.82	.324
	Visionary Leadership	74	5	7	6.17	.539
	Courageous Leadership	74	5.8	7	6.75	.359
Project Management Success	Project Mission	75	62	100	88.96	9.877
	Top Management Support	75	52	100	87.75	12.110
	Project Schedule Plan	73	60	100	91.26	10.280
	Client Consultation	72	75	100	92.78	8.330
	Personnel	73	59	100	90.62	10.394
	Technical Tasks	73	58	100	86.66	10.971
	Client Acceptance	73	69	100	90.86	8.538
	Monitoring and Feedback	72	74	100	93.11	7.862
	Communication	74	63	100	91.95	10.019
	Troubleshooting	75	59	100	90.19	10.915

Results of Assumption Testing

This study's 10 hypotheses suggested that for each of the 10 project management success dimensions there could be subset of the seven servant leadership dimensions that explain a significant proportion of its variance. The first stage of evaluating these hypotheses was to determine whether there were significant correlations between each of the project management success dimensions and one or more of the servant leadership dimensions. Consequently, since this phase of the hypothesis evaluation process was purely correlational, the data must be tested for its conformance to the assumptions of correlational analysis.

Results of Correlational Analysis

The variable measuring the client consultation dimension of project management success was significantly correlated with three variables measuring dimensions of servant leadership: developing and empowering others,

authentic leadership, and courageous leadership.These three servant leadership variables plus one other that satisfied the assumptions for regression (i.e., open participatory leadership) were entered into a stepwise multiple regression analysis (excluding all outliers) to ascertain the subset of variables which contributed significantincrements to the explanation of variance in the client consultation dimension of project management success. The results of this analysis are presented in Table 2.

Table 2: Correlations of Variables Measuring Project Management Success with Variables Measuring Servant Leadership that Survived Assumption Testing

Project Management Success Dimensions	Servant Leadership Dimensions	N	Correlation	p (2-tailed)
Project Mission	Developing and Empowering Others	74	-.094‡	.424
	Authentic Leadership	74	.000‡	.997
	Inspiring Leadership	72	-.067‡	.577
	Visionary Leadership	73	-.206†	.081
	Courageous Leadership	73	-.123‡	.300
Top Management Support	Developing and Empowering Others	75	.107‡	.365
Project Management Success Dimensions	*Servant Leadership Dimensions*	*N*	*Correlation*	*p (2-tailed)*
	Open Participatory Leadership	*67*	*.168‡*	*.175*
Project Schedule Plan	*Open Participatory Leadership*	*66*	*.168‡*	*.178*
	Inspiring Leadership	*70*	*.025‡*	*.837*
	Visionary Leadership	*71*	*-.004‡*	*.972*
	Courageous Leadership	*71*	*-.031‡*	*.798*
Client Consultation	*Developing and Empowering Others*	*71*	*-.235‡*	*.048**
	Authentic Leadership	*65*	*-.208‡*	*.097*
	Open Participatory Leadership	*65*	*-.235‡*	*.048**
	Courageous Leadership	*70*	*-.324‡*	*.006***
Personnel	*Developing and Empowering Others*	*72*	*-.068‡*	*.568*
	Authentic Leadership	*72*	*-.041‡*	*.730*

	Inspiring Leadership	70	*-.006‡*	*.964*		
	Visionary Leadership	71	*-.176‡*	*.143*		
	Courageous Leadership	71	*-.149‡*	*.216*		
Technical Tasks	*Developing and Empowering Others*	72	*-.063‡*	*.600*		
	Authentic Leadership	72	*-.148‡*	*.216*		
	Open Participatory Leadership	66	*-.010‡*	*.936*		
	Visionary Leadership	71	*-.229†*	*.055*		
	Courageous Leadership	71	*-.309‡*	*.009***		
Client Acceptance	*Developing and Empowering Others*	72	*-.107‡*	*.369*		
	Authentic Leadership	72	*-.132‡*	*.268*		
	Open Participatory Leadership	66	*.038‡*	*.760*		

Dimensions

	Inspiring Leadership	70	-.078‡	.524
	Visionary Leadership	71	-.169†	.158
	Courageous Leadership	71	-.225‡	.060
Monitoring and Feedback	Developing and Empowering Others	71	-.140‡	.244
	Authentic Leadership	71	-.173‡	.148
	Open Participatory Leadership	65	-.005‡	.968
	Courageous Leadership	70	-.215‡	.073
Communication	Developing and Empowering Others	73	-.110‡	.352
	Authentic Leadership	73	-.090‡	.448
	Inspiring Leadership	71	-.083‡	.494
	Visionary Leadership	72	-.064‡	.595
	Courageous Leadership	72	-.186‡	.118
Troubleshooting	Open Participatory Leadership	67	.058‡	.640
	Visionary Leadership	73	-.030‡	.802
	Courageous Leadership	73	-.131‡	.269

† Pearson product-moment correlation

‡ Spearman's Rho
* = $p \leq .05$; ** = $p \leq .01$

Table 3: Results of Stepwise Regression to Identify SLP-R Variables Contributing Significant Incrementsto the Explanation of Variance in the Client Consultation Dimension of Project Management Success

Variables	Component	Unstandardized Coefficients		Standardized Coefficients		
		B	SE	β	t	p
Included	(Constant)	129.746	17.263		7.516	<.001
	Courageous Leadership	-5.610	2.574	-.265	-2.18	.033
Excluded	Developing and Empowering Others	-1.276	3.839	-.072	-.332	.741
	Authentic Leadership	.206	3.407	.013	.060	.952
	Open Participatory Leadership	7.36	8.308	.156	.886	.379

Note: $N = 65$, $R^2 = .070$

The regression model including only the courageous leadership variable was significant$F(1, 63) = 4.751$, $p = .033$. This model was able to explain a significant proportion of the variance in client consultation. The two excluded variables (developing and empowering othersand authentic leadership), despite having significant zero order correlations with client consultation, proved to be too co-linear with courageous leadership to allow them to contributesignificantly to the explanation of client consultation variance after the inclusion of courageousleadership in the model. Figure 3 presents the homoscedasticity scatterplot for the residual x predicted scores and revealed a systematic tendency for residual variance to diminish as predicted scores increase.

The variable measuring the technical tasks dimension of project management success wassignificantly correlated with the courageous leadership dimension of servant leadership. A stepwise multiple regression was conducted regressing the technical tasks variable on the five servant leadership dimensions that satisfied all assumptions for correlation and regression (i.e.,excluding power and pride). This analysis failed to identify any additional SLP-R variables which contributed significant increments to the explanation of variance in the technical tasks dimension. The results for the final obtained linear regression model are presented in Table 4.

Table 4: Regression Model for the Explanation of Variance in the Technical Tasks Dimension of Project Management Success

Variables	Component	Unstandardized Coefficients		Standardized Coefficients		
		B	SE	β	t	p
Included	(Constant)	144.663	20.811		6.951	<.001
	Courageous Leadership	-8.656	3.097	- .332	-2.795	.007
Excluded	Developing and Empowering Others	7.027	4.599	.315	1.528	.132
	Authentic Leadership	2.269	4.059	.119	.559	.578
	Open Participatory Leadership	6.172	10.376	.098	.595	.554

Visionary Leadership	-4.072	2.448	- .251	-1.664	.101

Note: Overall R^2 = .11

The $F(1, 69) = 6.497$, $p = .013$. Figure 4 presents the homoscedasticity scatterplot for the residualx predicted scores and revealed a systematic tendency for residual variance to diminish as predicted scores increase.

Summary of Hypotheses Testing

Null Hypotheses H_{01d} and H_{01i} were rejected at $p \leq .05$. Null Hypotheses H_{01a}, H_{01b}, H_{01c}, H_{01e}, H_{01f}, H_{01g}, H_{01h}, and H_{01j} were not rejected since no variable measuring any of the seven Servant leadership dimensions was found to have a significant zero-order correlation with any of the project management success dimensions referenced by these eight hypotheses (i.e., project mission, project schedule/plan, top management support, client acceptance, communication, monitoring and feedback, personnel, and troubleshooting). The degree of homoscedascity for two models (i.e., client consultation and technical tasks) was checked and theresults are shown in Figures 3 and 4. The results are detailed as follows.

H₀1a and Ha1a. The null hypothesis for the project mission variable failed to be rejected,meaning the variable measuring any of the Servant Leadership dimensions did not reflect a significant relationship. No further analysis was conducted.

H₀1b and Ha1b. The null hypothesis for project schedule/plan variable failed to be rejected, meaning the variable measuring any of the Servant Leadership dimensions did notreflect a significant relationship. No further analysis was conducted.

H₀1c and Ha1c. The null hypothesis for the top management support variable failed to berejected, meaning the variable measuring any of the Servant Leadership dimensions did not reflect a significant relationship. No further analysis was conducted.

H₀1d and Ha1d. The null hypothesis for the client consultation variable was rejected, meaning the variable measuring any of the Servant Leadership dimensions reflected a significantrelationship. The degree of homoscedascity was checked (as illustrated in Figure 3).
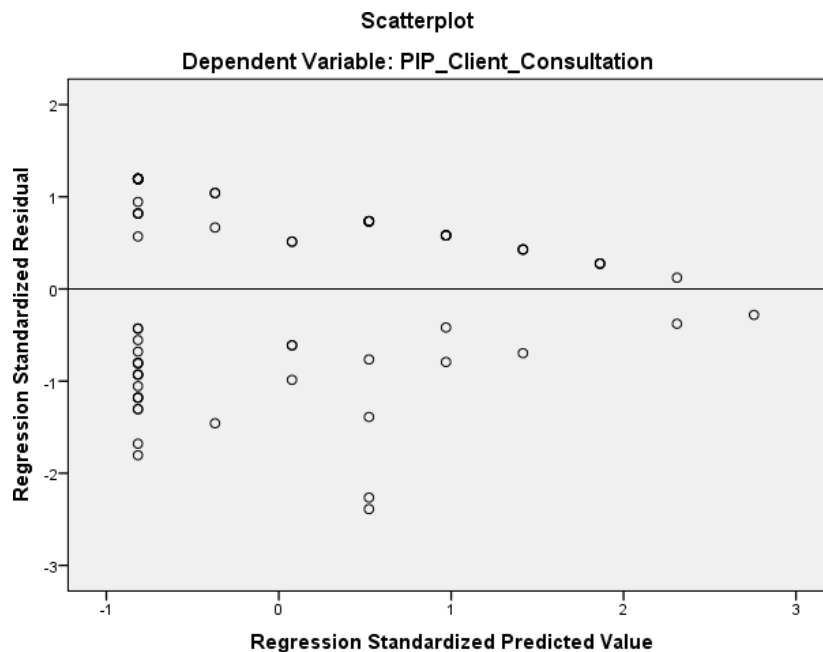

Figure 3. Homoscedasticity Scatterplot for the PIP Client Consultation = *f* (CourageousLeadership) Relationship

H₀1e and Ha1e. The null hypothesis for client acceptance variable failed to be rejected,meaning the variable measuring any of the Servant Leadership dimensions did not reflect a significant relationship. No further analysis was conducted.

H₀1f and Ha1f. The null hypothesis for communication variable failed to be rejected,meaning the variable

measuring any of the Servant Leadership dimensions did not reflect a significant relationship. No further analysis was conducted.

Ho1g and Ha1g. The null hypothesis for monitoring and feedback variable failed to berejected, meaning the variable measuring any of the Servant Leadership dimensions did not reflect a significant relationship. No further analysis was conducted.

Ho1h and Ha1h. The null hypothesis for the personnel variable failed to be rejected, meaning the variable measuring any of the Servant Leadership dimensions did not reflect asignificant relationship. No further analysis was conducted.

Ho1i and Ha1i. The null hypothesis for the technical tasks variable was rejected, meaningthe variable measuring any of the Servant Leadership dimensions reflected a significant relationship. The degree of homoscedascity was checked (as illustrated in Figure 4).
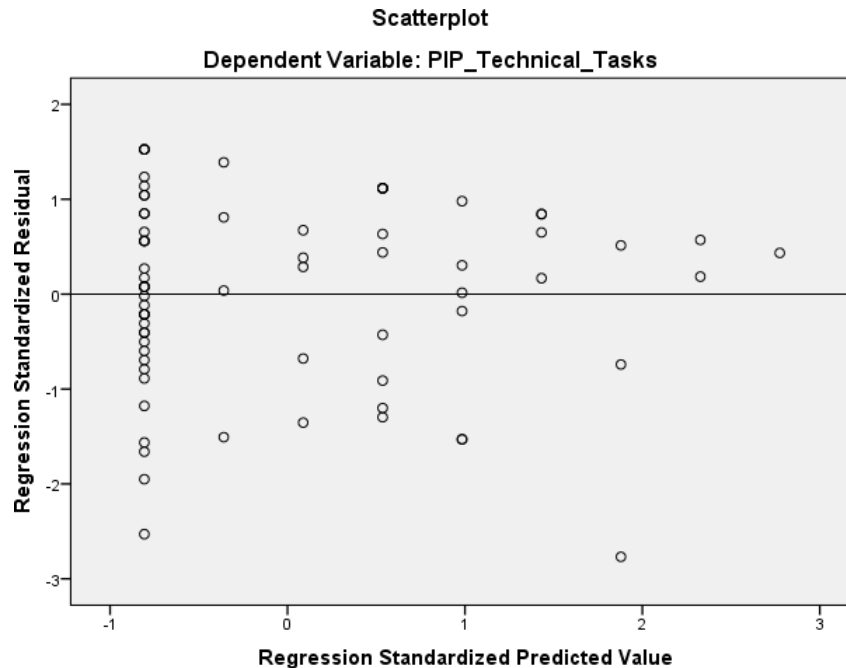

Figure 4. Homoscedasticity Scatterplot for the PIP Technical Tasks = *f (Courageous Leadership)* Relationship

Ho1j and Ha1j. The null hypothesis for the troubleshooting variable failed to be rejected,meaning the variable measuring any of the Servant Leadership dimensions did not reflect a significant relationship. No further analysis was conducted.

DISCUSSION ON RESULTS

This study's results support both the research questions and hypotheses. The results are inline with the theoretical framework and previous literature. This section presents the conclusionsbased on the results, which compares and interprets the findings from this study. The scholarly literature on servant leadership and project management success revealed that leadership is the catalyst that sparks collaboration and participation regarding achieving project management success (Martin & Edwards, 2016). For this study, project management success was defined according to basic PMI (2017) guidelines, stating that assessing criteria suchas cost, time, and quality at the end of the project can serve as reliable project management success indicators. Servant leadership was defined as a comprehensive approach to leadership that emphasizes the leader's respect for followers and their moral responsibility to motivate themto develop and grow (Greenleaf, 1970; Liden et al., 2015). This study investigated an explanatory relationship between servant leadership and project management success, which led to a deeper understanding of these two constructs. This implication supported Harwardt's (2020) findings, who, in the course of research found a causalrelationship between the application of servant leadership by management and the success dimensions of an IT project.

This study rejected the null hypotheses for $H01_d$ and $H01_i$, concluding that there was a statistically significant explanatory relationship between the courageous leadership dimension of servant leadership and two of the dimensions of project management success: client consultation and technical tasks. Equally, the null hypotheses for $H01_a$, $H01_b$, $H01_c$, $H01_e$, $H01_f$, $H01_g$, $H01_h$, and $H01_j$ failed to be rejected, concluding that there was not a statistically significant explanatory relationship between the six of the servant leadership dimensions (developing and empowering others; power and pride; authentic leadership; open, participatory leadership; inspiring leadership; and visionary leadership) and eight dimensions of project management success: clientacceptance, communication, monitoring and feedback, personnel, project mission, project schedule/plan, top management support, and troubleshooting.

In comparison, Harwardt (2020), who used the dimensions of servant leadership (empowerment, standing back, accountability, forgiveness, courage, authenticity, humility, and stewardship) by van Dierendonck and Nuijten (2011) and the success dimensions: project management success, perception success, and result success by Harwardt (2018). The results of Harwardt's (2020) investigation revealed that three of the servant leadership dimensions (authenticity, accountability, and forgiveness) had a positive impact on the three success dimensions: project management success, perception success, and result success of an IT project.However, the investigation failed to show a statistically significant relationship between five servant leadership dimensions (empowerment, standing back, courage, humility, and stewardship) and the three success dimensions: project management success, perception success,and result success (Harwardt, 2020). This study, in line with the research of Harwardt (2020), found a causal explanatory relationship between servant leadership and project management success. The extent to which there is a causal explanatory relationship needs further investigation.

Interpretation of the Findings

One plausible explanation why this study yielded the results with regards to not finding astatistically significant explanatory relationship between the six servant leadership dimensions (developing and empowering others; power and pride; authentic leadership; open, participatory leadership; inspiring leadership; and visionary leadership) and eight of the dimensions of project management success: client acceptance, communication, monitoring and feedback, personnel, project mission, project schedule/plan, top management support, and troubleshooting could be the sample size. This study's sample size was 76. Suppose the sample size would have been moresubstantial, such as the sample size of 568 found in Harwardt's (2020) research. In this case, the study's findings may have revealed a statistically significant explanatory relationship between the six servant leadership dimensions and the eight dimensions of project management success. Larger sample size would represent the population more, as in this case, limit outliers' influence or extreme observations, which is necessary to produce results between significantly different variables (Hickey et al., 2018).

In comparison to Harwardt (2020), who used the dimensions of servant leadership (empowerment, standing back, accountability, forgiveness, courage, authenticity, humility, andstewardship) by van Dierendonck and Nuijten (2011) and the success dimensions: project management success, perception success, and result success by Harwardt (2018). The results of Harwardt's (2020) investigation revealed that three of the servant leadership dimensions (authenticity, accountability, and forgiveness) had a positive impact on the three success dimensions: project management success, perception success, and result success of an IT project.However, the investigation failed to show a statistically significant relationship between five servant leadership dimensions (empowerment, standing back, courage, humility, and stewardship) and the three success dimensions: project management success, perception success,and result success (Harwardt, 2020). This study revealed an explanatory relationship between servant leadership and project management success. To what extent this explanatory relationshipexist needs further investigation.

LIMITATIONS

Although the results from this quantitative examination were useful in identifying the extent of the explanatory relationship between dimensions of servant leadership and project management success, certain limitations must be noted that that impact the generalizability offindings. One such limitation pertains to how participants were solicited. The use of an onlinepanel, SurveyMonkey Audience, meant that participant data could only be accessed from members in their network who were willing to complete the self-assessed surveys. Thus, information from servant leaders/project managers who were not members of SurveyMonkeywere not included in data collection or assessment. The self-selection process used to recruit participants for this study represents a related limitation.

Random sampling means that each member of a population of interest has an equal probability of being accepted for inclusion in the study (Taherdoost, 2016). However, self- selection bias must be considered a

limitation, thus impacting the external validity of the findings (Keeble et al., 2015). Even though self-selection bias cannot be eliminated, it can be quantified (Keeble et al., 2015). Moreover, since the data collection was online and self-assessed, it was not possible to verify the trustworthiness of participant responses to the online-based questionnaires, the participants' use of servant leadership, or that each respondent was a project management practitioner at the time of data collection.

Additionally, a common problem identified with self-assessed data is that participants can provide responses they believe are wanted in the study, which might bias the results. This type of bias is known as self-selection bias (Mondal & Mondal, 2018), and there was no procedure to verify or identify whether the participant responses was free of this bias. Similarly, a related and more global limitation of this study is that self-assessed data relies on the respondent's memory and interpretation of the event(s) or phenomenon of interest, which are inevitably subjective and thus also limits generalizability (Mondal & Mondal, 2018).

Another limitation of this study is that it used a quantitative approach for data collection and analysis. It is possible that a mixed-methods study could have produced different results. Similarly, a wholly qualitative study would also have useful in further clarifying the lived experiences of project managers and their knowledge of servant leadership with respect to project success outcomes.

The final limitation pertains to the data-analysis process. As stated by Kwak and Kim (2017), missing values and outliers frequently occur during the data collection phase in all fields of natural and social sciences. The purpose of using any method to remove outliers is to minimize the influence of error due to factors other than those being accounted for during the recalibration process (Parrinello et al., 2016). Outliers that were excluded during the analysis made drawing statistical inferences more difficult, which restricted the generalizability of the findings (Kwak & Kim, 2017).

IMPLICATIONS

This study could contribute to the fields of project management and leadership in that it supported the importance of servant leadership in influencing several dimensions of project management success. Specifically, the client consultation and technical tasks dimensions of project management success were significantly correlated with the courageous leadership dimension of servant leadership. One significant implication for practice that emerged from the data is that servant leadership was positively and significantly correlated with project management success among the cohort of respondents in this study. Based on the findings detailed herein, organizational leaders engaged in project management should consider the results of this study as reinforcing the importance of one's style of leadership in terms of project success outcomes.

Hatherill (2017) noted a natural connection between servant leadership and the desire to serve members of the organization, extending to the project manager's ability to visualize the relationship of the project to overall organizational goals and, in some cases, to the broader community. This positive implication supports the use of servant leadership in project-based organizations, which could the development of targeted training efforts on how to implement this style of leadership. These results detailed in this study could also assist with broadening and deepening the dialogue between scholars and practitioners, serving as a means for future research, and expanding servant leadership theory through exploration of the explanatory relationship between the dimensions of servant leadership and project management success.

RECOMMENDATIONS FOR FURTHER RESEARCH

Scholars have described the linkages between leadership style and project management outcomes (Aga, 2016; Aga et al., 2016; Ding et al., 2017). Indeed, a project manager's leadership skills represent a potentially highly influential factor for advancing projects to a successful conclusion (Ahmed & Abdullahi, 2017; Frefer et al., 2018). However, no primary leadership style has been identified for project management success in the literature. Based on the findings of this research, a number of recommendations for future research are suggested. One recommendation would be to further investigate the constructs of servant leadership and project management success to determine the strength of the relationship, possibly involving mixed methods study that used qualitative findings. This examination targeted a limited cohort of 76 self-selected participants who provided a snapshot view of their experiences of servant leadership and project management success factors. Other employee groups such as project team members could provide different or more nuanced perspectives of the phenomena of interest. These recommended approaches would add greater depth and clarity in explaining the findings of this study.

CONCLUSION

In conclusion, this quantitative study tested six assumptions using the statistical technique, multiple linear regression to answer the ten research questions, and close the research gap by investigating an explanatory relationship between servant leadership dimensions and project management success dimensions. The data analysis

revealed that the client consultation and technical tasks dimensions of the project management success were positively significant toan explanatory relationship between servant leadership's courageous leadership dimensions. By comparison, client acceptance, communication, monitoring and feedback, personnel, project mission, project schedule/plan, top management support, and troubleshooting dimensions of project management success did not show a positively significant explanatory relationship between developing and empowering others; power and pride; authentic leadership; open, participatory leadership; inspiring leadership; and visionary leadership dimensions of servant leadership. This study was limited in scope with limited participants in a specific demographic, project management practitioners who practiced servant leadership within the Pakistan. Thefindings are expected to add new insight to the project management and leadership fields, highlighting the importance of the inherent elements of servant leadership and project management success relationship and the factors that influence it, as it could contribute to organizations' overall success. Ultimately, the findings from this study could lead to implementing the principles of servant leadership into training courses for project managers within organizations, which could benefit this population in improving project management success.

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