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Impact of Leadership Styles on Government Construction Project Success: A Structural Equation Modelling Approach

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Abstract

Government construction projects play an important role in both developed and developing countries. They contribute about 80% of total capital assets, 10 % of GDP, and more than 50% of the wealth invested in fixed assets, and employment opportunities. As such several countries like Sweden in Europe, Indonesia in Asia, South Africa and Kenya in East Africa have invested heavily and achieved success in construction projects. Similarly, Uganda has also invested heavily in construction projects however majority of these projects been unsuccessful, yet projects contribute to economic development. The aim of this study was to determine the contribution of leadership styles to the success of government construction projects in Uganda. The study was cross-sectional with a quantitative research design. A self-administered questionnaire was used to collect data from a sample of 100 Kampala Capital City Authority construction projects from a population of 120 projects that were stratified according to the five divisions of Kampala district. Four respondents were selected from each of the 100 projects selected resulting into a total of 400 respondents for the study. Structural Equation Modelling was conducted using SPSS. Results show that leadership styles especially communication and participation are positively and significantly associated with government construction project success. Therefore government project managers should communicate effectively as well as involve stakeholders at every stage of the project cycle to realise project success. It is recommended that for purposes of replicating the study, the path goal theory be adopted. Also, government ministries need to adopt the proposed model as it serves as a valuable resource for researchers and practitioners, especially those involved in government construction projects. Similarly, government through the ministry of works and transport should constantly remind government project managers to always ensure adequate internal and external communication and allow participation of stakeholders during the implementation of government projects.

Keywords: Communication, Leadership styles, Government Construction Projects, Participation, Project Success, Structural Equation Modeling, Uganda

1. Introduction

One of the prevailing questions regarding successful implementation of Government construction projects is whether leadership styles contribute to government construction project success. This follows the realization that government construction projects play a significant role in economic growth and development (Oyaya, 2016). The contribution of construction projects in both developed and developing countries is considerable; about 80% of total capital assets, 10 % of GDP, and more than 50% of the wealth invested in fixed assets, and creates various employment opportunities (Owoo and Lambon-Quayefio, 2018). In order to transform the economy into a middle-income status and achieve Vision 2040, the government of Uganda has highlighted construction projects as key drivers of growth. It has embarked on several construction projects aimed at boosting the economy; improving the health, standard of living, and development of its citizens. Despite the benefits, majority of government construction projects in Uganda perform below expectations, have challenges including poor quality, delayed completion, overshoot budgets, and in most extreme cases face total shutdown (Office of Auditor General, 2018; Tayebwa, 2014). For example, Uganda incurred US$ 132 million instead of US$ 111 million in extra project requirements for Bujagali dam project due to miscommunications among stakeholders (Mwesigwa et al., 2018).

Furthermore, the construction of Ajeleck, Opot and Ojanal bridges in northern Uganda was cancelled due to disagreements among stakeholders (Civil Society Budget Advocacy Group, 2018). A further 15 engineering projects

undertaken by Kampala Capital City Authority, National Roads Authority (UNRA) and National Water and Sewerage Corporation (NWSC) failed (Office of Auditor General, 2017). Also, nine UNRA and NWSC construction projects between 2010 and 2016 suffered delays and costs increased by approximately US$17 million over the estimated cost due to poor site information, disagreements, and a lack of stakeholder involvement (Auditor General's report, 2017). This leads to questions about what strategies can be employed to avoid such a situation, our study sought to suggest some.

Various researchers have tried to explore project success from various perspectives including teamwork (Kariuki, 2015), project managers' skills (Sunindijo, 2015), and total quality management (Jong et al., 2019). A few that have used the Ugandan evidence have concentrated on project communication, individual commitment, social networks, and perceived project performance (Ahimbisibwe & Nangoli, 2010), procurement procedures, and project performance (Onencan, 2020). Besides most of these studies have examined aspects related to project success based on the stakeholder theory (Dwivedi & Dwivedi, 2021) and others on Resource based view theory (Engelbrecht et al., 2017). As such there is scant theoretical and empirical research on leadership styles and the success of government construction projects. As findings on government construction projects vary across nations, some studies are needed in the local setting to increase the relevance and accuracy of results.

Literature has not distinctively identified the role of leadership styles on project success yet it is a critical factor in ensuring project success. This research thus adds to the literature by taking results from a geographically distinct context, a developing country such as Uganda. Also, this research uses the path-goal theory to explain the relationship between leadership styles and success of government construction projects in Uganda. Consequently, this article aims to provide a more informed and empirically based image of leadership styles and government construction project success, using structural equation modeling. Therefore, this article seeks to attain the following research objectives:

- To examine the relationship between leadership styles and government construction project success in Uganda.
- To generate a model that explains government project success

This article discusses the impact of leadership styles on government construction project success and it is organized as follows; first, the empirical literature is presented. The theory and hypothesis are then presented, followed by the study methodology, results, and discussion. The final sections of the article present the conclusion, implications, and future research direction.

2. Literature review

2.1. Path goal theory

To help understand the role of leadership styles in project success, the path-goal theory as reformulated by House (1996) was adopted. The theory assumes that there is no one best or unique style of leadership that transcends all project situations (House 1996). The theory explains that leaders that choose leadership styles that suit the project environment clarify the path stakeholders take to attain individual and project goals and remove roadblocks that stand in the way to achieve project goals (House, 1996). Such leaders provide expected performance levels and means of achieving them and guide stakeholders to choose the best path for reaching their individual goals (Mwaisaka, 2019).

Stakeholders are assigned specific duties for which they are held accountable (Babirye et al., 2022). Armed with a clear path, stakeholders become confident, motivated, enthusiastic, and empowered to work hard to deliver set project goals (Atsebeha, 2016). Therefore, project leaders need to provide enough information about tasks and also allow their participation in project decisions in order for stakeholders to accomplish tasks. This way a project leader reduces the roadblocks that occur in the path of the project stakeholders and makes their journey easier toward the achievement of project goals (Mwaisaka et al., 2019). In addition, Grimm (2018) confirms that this makes stakeholders feel satisfied to commit, trust and cooperate towards the project while performing project activities when they have enough information on how the project benefits them.

Accordingly, the path-goal theory advances participation and communication leadership styles among others that can be adopted by leaders to achieve the desired level of project performance (House, 1996). Under communication style, the theory explains that leaders exchange information with stakeholders; give chance to stakeholders to be heard; and emphasize collaborative and positive interactions as well as self-satisfying relationships that enhance work unit cohesion, reduce work stress and attrition (Atencio, 2012; House, 1996). Since government construction projects involve group tasks performed in a series of interdependent phases that form the life cycle of projects (Archibald et al., 2012). The activities and tasks in one phase feed into the next phase and must be completed first before another phase sets in (Archibald et al., 2012).

As per the theory, collaborative interactions among project teams, and sharing information on each completed phase activity (reports) enable a smooth project transition from one phase to another. Under participative leadership, the theory explains that when leaders involve stakeholders in defining performance goals, strategies for executing tasks, standards, and rewards, project targets become clear, and stakeholders feel valued (Monzani *et al.,* 2015; House, 1996). This results in their motivation, commitment, trust, and support as well as the acquisition of creative change ideas and knowledge that trigger project success (Taylor, 2018).

2.2 Leadership styles

Leadership style refers to the approach, method, outlook (Hersey and Blanchard, 1982), attitude, and behavior that a project leader employs to influence stakeholders toward the accomplishment of project objectives (Nakato, 2019). Accordingly, leaders choose styles they are comfortable with (House, 1996) and believe will motivate those individuals who can affect or be affected by the project (Freeman, 1984) to accomplish set goals.

2.3 Project success

A construction project is regarded as successful when it's completed on time, and within budget while meeting quality expectations (Shah, 2016; Musekura, 2013; Pinto, 2010). The desire to achieve set government construction project goals worldwide has become a concern to project leaders (Pollack et al., 2018; Tunji-Olayeni et al., 2016). This sets the foundation of the next section which will review literature on the relationship between leadership styles and project success as hypothesised in the study.

2.4 The relationship between leadership styles and project success

Leadership styles influence and facilitates the performance of stakeholders to achieve desired project goals (Nemaei, 2012). The styles project leaders adopt play a vital role in construction projects whose success is measured by completion on time, within budget while meeting quality expectations (Famakin and Abisuga, 2016; Yukl, 2006). Within government construction projects, exists a number of stakeholders with specific interests and coordinated activities with start as well as end dates (Msengana, 2012). Equally projects post a series of interdependent group activities, stakeholders with varying interests, competencies, backgrounds and objectives (Akpoviroro et al., 2018).

Suitable leadership styles help to communicate ideas, mobilise resources, coordinate activities and mobilise stakeholder engagement towards project success (Mwaisaka, 2019; Somech, 2005). With Communication leadership relevant project information is shared, exchanged and interpreted among internal and external stakeholders (Mugo and Moronge, 2018). This information may include performance reports, requested changes, drawings, architectural designs, specifications, project objectives, rules, roles, and tasks construction methods (Muszynska, 2015; Olsson and Johansson, 2011). This helps to build harmony, trust, commitment , satisfaction, interactions and reciprocal collaborative relationships among project stakeholders are realised that are key in realising project success (Ssenyange et al., 2017:78; Bilczynska-Wojcik, 2014; Coombs, 2007). In agreement, Mezgebu (2014) adds that the purpose of communication in construction projects whether informal, formal, internal, or external is to facilitate the exchange of ideas, and clarify roles and misunderstandings in order to execute the project successfully.

Equally, in a study conducted by Maame (2012) on the effect of communication leadership on construction projects in Ghana, it was revealed that communication is a vital factor in project success and whenever it is poor projects there is project delay, escalation of costs, and abandonment of projects. In fact, Safapour, Kermanshachi, Kamalirad, and Tran (2019) conceptualized that the more stakeholders acquire timely information and interact with project leaders the less role ambiguity and conflict there is in a project toward success Therefore, it is important for project leaders to communicate effectively with different groups of stakeholders to remove any roadblocks that stand in the way of achieving project goals (Grimm, 2017; House and Mitchell, 1974). Moreover, participation leadership enables project information sharing, stakeholder motivation, commitment, and support, cooperation which are key in completion of projects on time, within budget and quality expectations (Monzani, Ripoll, and Peiro, 2015; House, 1996).

Participation of stakeholders periodically help leaders to create a sense of shared values about the project that help to build support and cooperation among stakeholders (Dolatabadi and Safa, 2010). For example, periodic stakeholders' consultation and exchange of ideas at the project design and execution stage enables leaders to develop empathy and a sense of ownership among stakeholders that triggers their support and cooperation (Daniel et al., 2019). It also enhances stakeholders' connection to the project and inspires them to cooperate and work hard to ensure that they realize the set project (Mwaisaka, 2019). Moreover, consulting and exchange of ideas with stakeholders especially the local community on matters pertaining to tasks, execution plans, rewards, designs, project goals, and benefits, makes them feel part of and indebted to the project (Kiplangat, 2017). This triggers their cooperation and offers support to the project to ensure that the project succeeds (Ndifuna, 2015; Williams and Walton, 2013). Thus, it's important to note that project leaders guide the performance of project members throughout the project towards project success and also to achieve their goals (Taylor, 2018). However, in the absence of good leadership styles and skills, projects will stagnate, experience hostilities and post poor results yet several countries invest in construction projects (Liphadzi et al., 2015).

Several studies have continued to report and document a positive relationship between leadership styles (participation and communication) and project success. However, few scholars revealed that there is a negative relationship between leadership styles and project success (Wu, *et al.,* 2017; Saha and Kumar, 2017; Leenders et al., 2003: Watt, 2014). This justifies the need for this study.

3. Methodology

3.1 Research design and approach

The study adopted a cross-sectional with a quantitative research design where a self-administered questionnaire was used to collect. Data was analyzed using SPSS and Structural Equation Modelling (SEM) was used to evaluate the relationships among the set of variables as well as develop a model that explains the success of government construction projects. Since SEM employs a confirmatory approach when analysing structural theory about a phenomenon (Bollen and Brand, 2010), it was chosen because it enabled the researchers to examine a series of interdependent relationships concurrently (Clark, Black and Judson, 2017). This method was also ideal because compared to CFA; SEM gives the possibility of interrelationships among unobserved variables through measurement and structural model (Lee & Song, 2014).

3.2 Population and sample procedure

This study adopted a sample of 100 projects from a population of 120 government construction projects implemented by KCCA (Krejcie and Morgan, 1970). These projects were stratified according to the divisions that make up Kampala namely; central, Makindye, Rubaga, Nakawa, and Kawempe. The researcher chose a

stratified random sampling method to reduce bias and to get deeper insights from all respondents in all the divisions (Sharma, 2017). Additionally, the limited availability and efficiency of internet communication services in Uganda could not support timely data collection by mailing questionnaires to respondents (Nsereko et al., 2018). From each selected project 4 participants (project manager, contractor, engineer, and local council leader) were purposively selected based on their roles, experience, and perception to arrive at 400 participants for the study (Polit and Beck, 2012; Pinsonneault and Kraemer, 1993). Useable questionnaires were physically received from 335 out of 400 respondents representing a response rate of 83.8% adequate enough for analysis ((Debela, et al., 2021; Mugambi and Kinyua, 2020). In this study, the unit of analysis was a government construction project while the unit of inquiry were the stakeholders.

3.3 Validity and reliability

The internal reliability of the questionnaire was assessed by computing the Cronbach's Alpha coefficients using the inter-item test method (Cho and Kim, 2015; Saunders, et al., 2007), and as seen in Table 1 below all results for the variables are above 0.7 confirming that the measurement instrument was reliable (Bajpai and Bajpai, 2014; Nunnally, 1967).

Table 1: Reliability results

	Cronbach Alpha Coefficient
Leadership Styles	0.869
Project Success	0.868

Source: Primary data

The validity of the study instrument which is the extent to which given dimensions of the study variables adequately represented the core construct was assessed through first content validity where expert opinions from researchers and colleagues were sought which helped build a content validity index (CVI). In addition, convergent validity and discriminant validity were tested by assessing the Average Variance Extracted (AVE) and composite reliability for each of the study variables. As seen in Table 2, the results of composite reliability of all latent variables are above 0.7 (leadership styles=0.854, project success=0.847), and the Average variance extracted of all latent variables is above 0.5, which meets the acceptance level (Henseler et al., 2015; Field, 2009; Fornell and Larker, 1981). So, this reveals that the construct measures were valid and could correctly measure the study variables.

Table 2: Reliability and Validity results

	Composite Reliability	***Average Variance Extracted (AVE)***
Communication	.877	.641
Participation	.831	.552
Leadership Styles	**.854**	**.597**
Cost	.834	.626
Quality	.844	.574
Time	.864	.761
Project Success	**.847**	**.654**

Source: Primary Data

3.4 Measurement of variables

Project success was measured using time, cost, and quality (Atkinson, 1999; Chan, 2003). Leadership styles were operationalized into participation and communication. Participation was measured using modified tools of Arnstein (1969) adopted by Kanungo (1982), and communication was measured using an abridged version of Goldhaber and Rogers (1979) communication audit survey questionnaire also adopted by Nangoli (2010).

3.5 Data analysis

During analysis, Quantitative data were analyzed using Statistical Package for Social Scientists (SPSS) 27. The researcher conducted quantitative data analysis through descriptive and inferential statistical analysis (Bulti, 2016). Descriptive statistical analysis provided a summary of the population or the sample under study while Inferential statistics (structural equation modeling) aided the researcher to test for a relationship between study variables (Sinkovics and Alfoldi, 2012; Marshall and Jonker, 2011; Zikmund et al., 2009). A two–step method as proposed by Anderson and Gerbing (1988) was followed. The first stage involved the estimation of the measurement model using confirmatory factor analysis and then estimating the hypothesized structural model using structural equation modeling as the second stage. The structural model fit helped to assess whether the hypothesized theory matched the collected data. Generally, the structural equation model was assessed for validity using the goodness of fit indices as summarised in Table 3 before assessing whether the structural relationships in the model were consistent with theoretical expectations (Hair et al., 2018; Hair et al,.2010)

Table 3: Summary of fit indices used in this study

Fit index	Acceptance level	Remarks
Absolute fit indices		
GFI	0.90 or greater	a value close to 1 indicates a perfect fit
RMSEA	0.05 – 0.08	value less than 0.50 is considered
Incremental fit indices		
NFI	0.90 or greater	a value close to 1 indicates a perfect fit
TLI	0.90 or greater	a value close to 1 indicates a perfect fit
CFI	0.90 or greater	a value close to 1 indicates a perfect fit
Parsimonious fit indices		
CMIN/DF	$1.0 \leq \chi 2/df \leq 5$	The lower limit is 1.0, the upper limit is 3.0 or as high as 5

Source: Hair et al. (2018) and Hair et al.(2010)

4. Findings

4.1 Respondents profile

Table 4 shows that out of the 335 questionnaires received and used, males accounted for 59.1% compared to females who accounted for 40.9%. Again, in terms of age, the majority of project stakeholders who participated in the study were aged between 31-45 years (54.6%), followed by those aged between 46-65 (20.9%). Those aged between 18-30 years (17.6%) came next, followed by those aged 66-74 years (5.7%) and those above 75 years came last (1.2%). In terms of the highest level of education (see Table 5), the majority of government construction project stakeholders who participated in this study were diploma qualification holders (31.0%), followed by bachelor's degree holders (29.6) and postgraduate holders followed (17.6%). Results also revealed that those with a master's degree accounted for only 3% and certificate holders were only 9%. These results showed that the majority of the respondents were knowledgeable and could easily understand the items in the questionnaire which partly accounted for a good response rate of 83.8%.

Table4: Age group

Variable	Measurement	Count	Valid Percentage
Age group	18-30	59	17.6
	31-45	183	54.6
	46-65	70	20.9
	66-74	19	5.7
	75+	4	1.2
	Total	**335**	**100.0**

Table 5: Highest level of education

Variable	Measurement	Count	Valid Percentage
Highest level of education	Primary	7	2.1
	O' Level	13	3.9
	A' Level	12	3.6
	Certificate	30	9.0
	Diploma	104	31.0
	Bachelors	99	29.6
	PostgraduateDegree	59	17.6
	Masters	10	3.0
	Others	1	0.3
	Total	**335**	**100.0**

4.2 Descriptive statistics for latent variables

A summary of the standard deviation and mean scores for leadership styles and project success variables is indicated in Table 6. As seen in Table 6 the mean score for leadership styles is 3.559 and 3.623 for project success on a six Likert scale with standard deviations of 0.819 for leadership styles and 0.886 for project success. Because of small standard deviations compared to mean values, it is clear that the data was well spread out, data points were close to the means and hence calculated means highly represented the observed data (Warsame, 2021; Field, 2018). This also implied that the respondents' understanding of study variables and the views about the questions asked were closely the same (Bashir, 2018).

Table 6: Descriptive statistics

Latent variables	No.	Min.	Max.	Mean	Std. Error	SD
Leadership Styles	335	1.000	5.882	3.559	0.049	0.819
Project Success	335	1.375	5.938	3.623	0.048	0.886

4.3 Measurement Model estimation

To arrive at valid conclusions in the study it was necessary to use a measurement model that was valid (Field, 2017). Therefore, in this study, Confirmatory Factor Analysis (CFA) with the Amos program was conducted for leadership styles and project success to assess the validity and reliability of the measurement models for this study.

4.3.1 CFA Measurement model for leadership styles

The leadership styles concept was measured using participation and communication. Communication originally had 16 items (LDCM1-LDCM16) and participation had 18 items (LDPT1 - LDPT18). The initial stage of the inter-item correlation matrix revealed that communication dimension items like LDCM5, LDCM6, LDCM7, LDCM10, LDCM12, LDCM14, LDCM16, and participation items like LDPT3, LDPT4, LDPT5, LDPT6, LDPT8, LDPT9, LDPT12, LDPT14, LDPT15, LDPT16 were deleted at EFA because their loadings were below the recommended 0.5 thresholds. On subjecting the retained items (EFA model appemdix 1) to CFA, communication dimension items like LDCM1, LDCM8, LDCM11, and LDCM13 and participation items like LDPT13, and LDPT18 were removed. The removal of the weakly correlated items reduced the number of items of the construct as it was conceptualized (see Figure 1). In addition, the retained items were significant and had standardized factor loadings higher than the recommended level of 0.5 thus preserving the meaning of factors (Hair et al., 2018; Hair et al., 2010). These findings confirmed the validity of the final model with excellent model fit statistics for the leadership styles construct as the Confirmatory analysis fit indices are within the recommended range (Hair et al., 2010), for example, the Goodness – of fit (GFI) is greater than 0.95, Comparative fit index (CFI) is greater than 0.95 and Tucker – Lewis Index (TLI) is greater than 0.95. The CFA measurement model, fit statistics, and standardised regression estimates output are indicated in Figure 1 and Table 7 respectively.

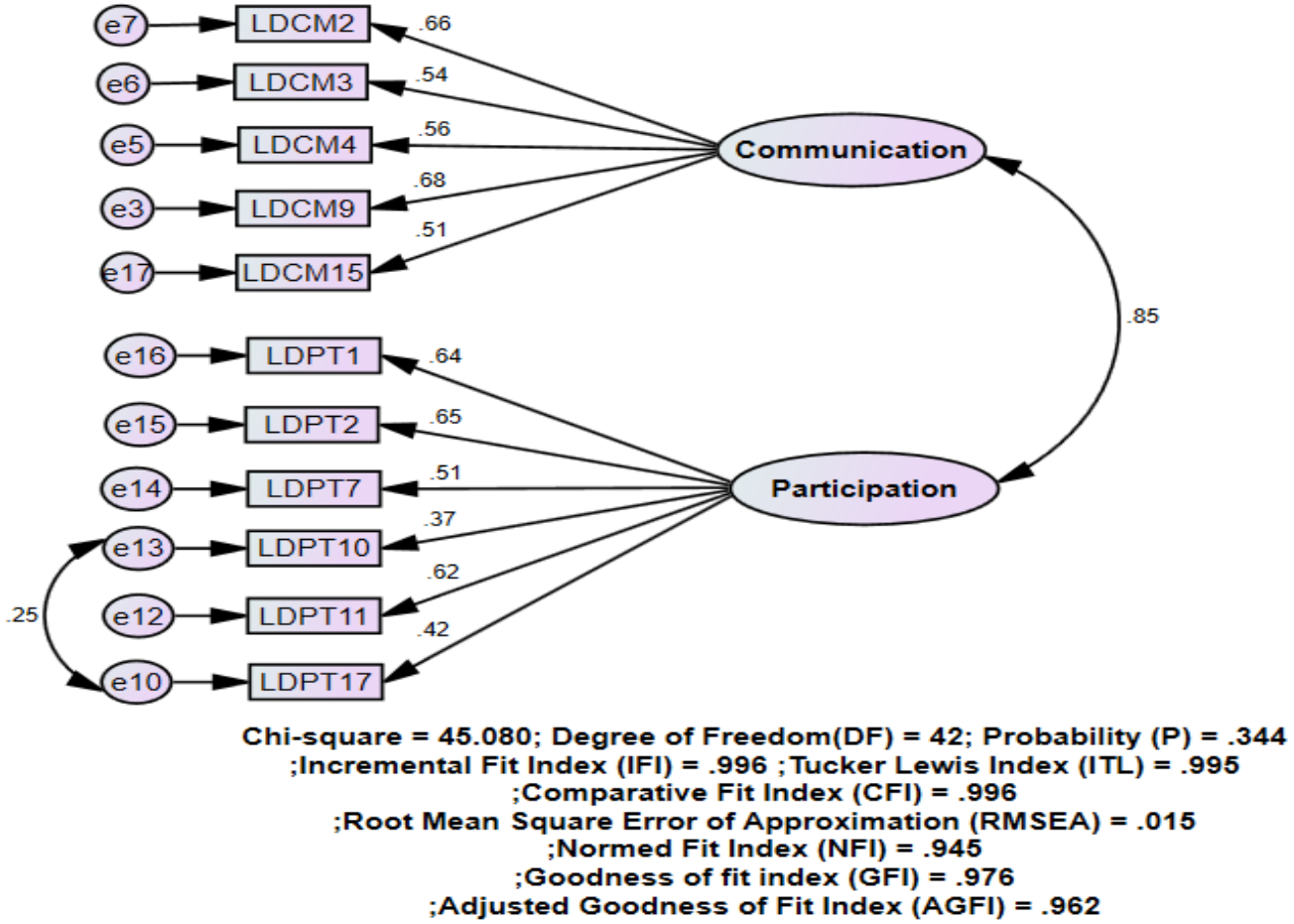

Figure 1: CFA Measurement Model for Leadership Styles

Table: 7: Standardised Model Estimates for Leadership Styles

			β	S.E.	C.R.	*p*
LDCM15	◄—	Communication	.514			
LDCM9	◄—	Communication	.680	.160	7.929	***
LDCM4	◄—	Communication	.559	.153	7.134	***
LDCM3	◄—	Communication	.538	.149	6.968	***
LDCM2	◄—	Communication	.658	.163	7.803	***
LDPT17	◄—	Participation	.420			
LDPT11	◄—	Participation	.621	.230	6.356	***
LDPT10	◄—	Participation	.373	.157	5.661	***
LDPT7	◄—	Participation	.507	.213	5.816	***
LDPT2	◄—	Participation	.653	.220	6.470	***
LDPT1	◄—	Participation	.638	.242	6.419	***
LDPT17	◄—	Participation	.420			
		*** p<.01				

Note:β : standard Beta coefficients, S.E: standard error, C.R:critical ratio, *p: probability value*

4.3.2 CFA Measurement model for project success

Project success was measured using Time, Quality, and Cost. Time originally had 6 items (PSTM1- PSTM16), Cost had 4 items (PSCO1 – PSCO4) and Quality had 6 items (PSQU1- PSQU6). The initial verification of the inter-item correlation matrix revealed that Quality item PSQU3, time dimension items PSTM3, PSTM6, and cost dimension item PSCO2 were deleted by EFA because the loadings were below 0.5.(Appendix 2) The remaining items were subjected to a CFA. Under CFA, the EFA model was re-specified by iteratively removing quality items PSQU1, PSQU6; cost item PSCO4, and time item PSTM3. During re-specification by deleting those items that did not meet the acceptable criteria and retained only those that met the criteria. During the re-specification process, we aimed at retaining at least three items for each construct because constructs with a lesser number are viewed as weak and unstable (Costello and Osborne, 2005:5). At the end of this process 3 items for Time (PSTM1, PSTM2, PSTM5), 3 items of Cost (PSCO1, PSCO2, PSCO3) and 3 items of Quality (PSQU2, PSQU4, PSQU5) were retained in the final model. The retained items were significant and had standardized factor loadings higher than the recommended level of 0.5 thus preserving the meaning of factors. These findings confirmed the validity of the final model with excellent model fit statistics for the project success construct (see Table 8). Again, results under Figure 2 reveal that the Confirmatory analysis fit indices are within the recommended range (Hair et al 2010), for example, the Goodness – of fit (GFI) is greater than 0.95, the Comparative fit index (CFI) is greater than 0.95 and Tucker – Lewis Index (TLI) is greater than 0.95.

Table 8: Standardised Model Estimates for *Project* Success

			β	S.E.	C.R.	*p*
PSCO1	◄—	COST	.708			
PSCO2	◄—	COST	.578	.061	10.236	***
PSCO3	◄—	COST	.636	.064	10.238	***
PSTM1	◄—	TIME	.717			
PSTM2	◄—	TIME	.707	.066	11.428	***
PSTM5	◄—	TIME	.372	.065	6.171	***
PSQU2	◄—	QUALT	.660			
PSQU4	◄—	QUALT	.651	.108	9.967	***
PSQU5	◄—	QUALT	.632	.110	9.725	***
		*** *p*<.01				

Note:β : standard Beta coefficients, S.E: standard error, C.R:critical ratio, *p: probability value*

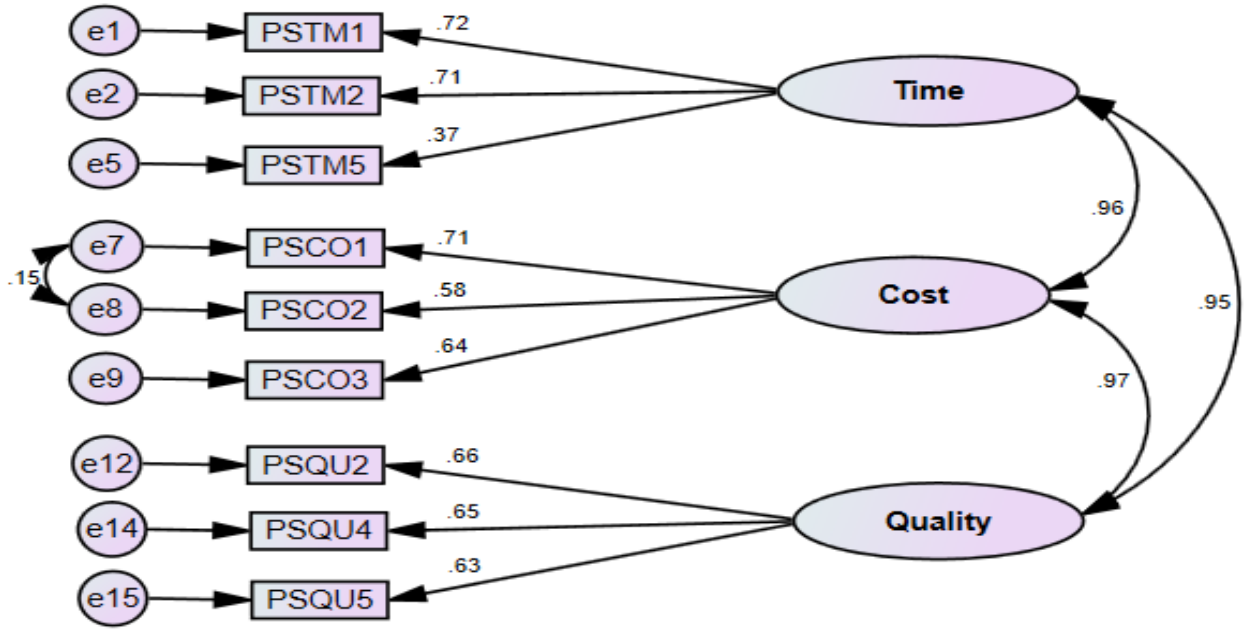

Figure 2: CFA Measurement Model for Project Success

4.4 Structural Equation Modeling

Structural equation modeling (SEM) was employed to measure the relationships among study variables following the set study hypothesis. Prior to undertaking structural equation modelling, it was necessary to establish how well the manifest variables converged as valid indicators of the global latent variables (Bedi, Kaur, and LaI, 2017; Anderson and Gerbing, 1988). As such, two (2) models (leadership styles, and project success were assessed for the goodness of fit and subsequently, the manifest and global latent variables were specified into a structural model to represent exogenous and endogenous constructs. One exogenous variable (leadership styles) and one endogenous variable (project success) were specified in the structural model. Conversely, not all manifest variables of the latent constructs in CFA were retained while estimating the structural model. Accordingly, the CFA measurement model for leadership styles confirmed eleven (11) manifest variables as indicators of leadership styles. However, only four manifest variables namely; LDCM9 for communication and LDPT2, LDPT2, LDPT10, and LDPT11 for participation were retained in the structural model as measurements of the leadership styles variable after estimating the structural model to establish model fit. Equally, the project success measurement model established nine manifest variables as indicators of project success in the model. However, four manifest variables (PSTM1, PSTM2, PSTM5, and PSCO1) were dropped while estimating the overall structural model for theory fit. As such, the endogenous variable project success in the final structural model was measured by seven (7) manifest variables (PSQU2, PSQU4; PSQU5 for quality, PSTM2 for time, and PSCO1, PSCO2, PSCO3 for cost). Again, premising on Hair et al. (2010:646), all the indices for the goodness of fit were within the acceptable range (Chi-Square ($\chi 2$) = 62.665, the degree of freedom = 43, CFI = .981 and TLI= .976, AGFI= .951 and lastly RMSEA was .037). Hence, was subsequently used to test for the direct relationship between leadership styles and project success as hypothesized in the study. The results for the overall structural equation model that explains project success are shown in Figure 3.

Hypothesis testing

It was hypothesized that there is a relationship between leadership styles and project success. Accordingly, testing direct paths between leadership styles and project success was conducted and the results are reflected in Table 9.

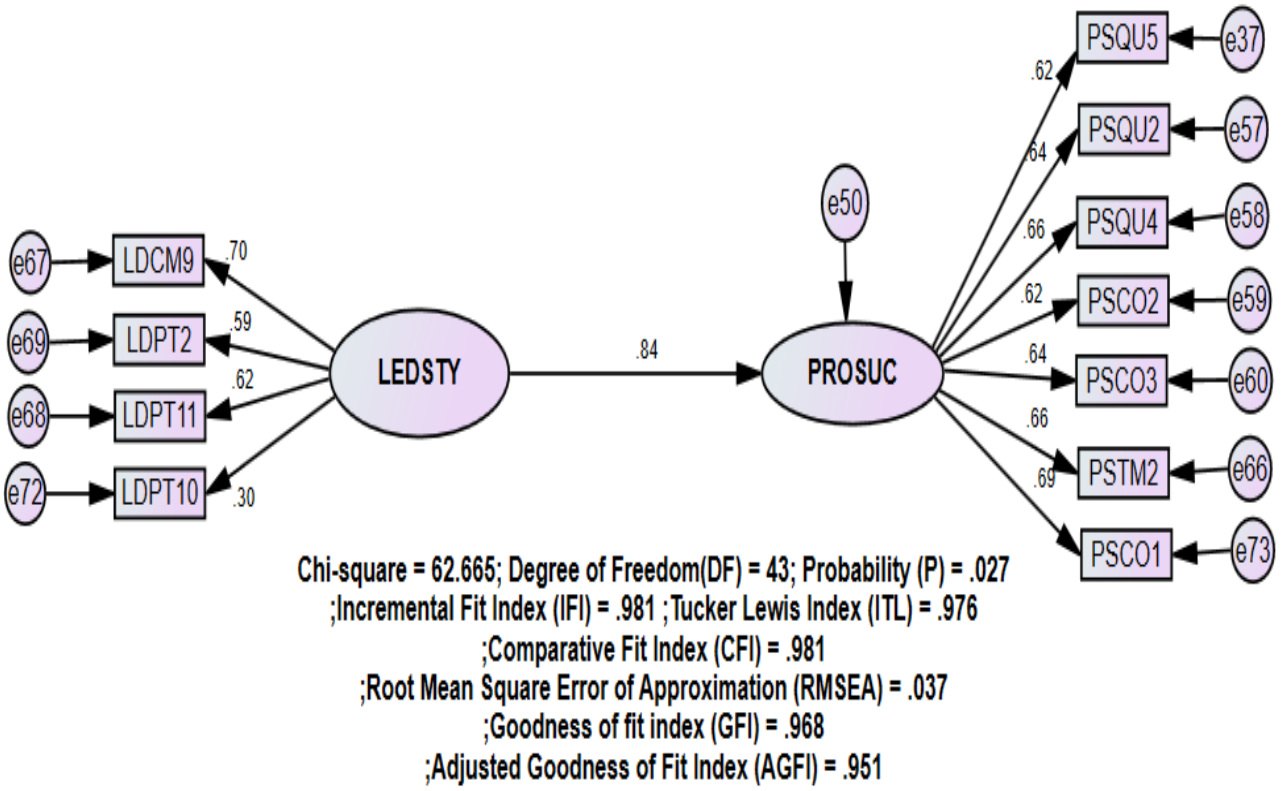

Figure. 3: Overall Model Explaining Government Construction *Project Success*

Table 9: Structural Model Estimates

			Unstandardized coeff	S.E.	C.R.	Standardised coeff	P
Project success	◄—	Leader styles	.756	.090	8.440	.840	***

Note: S.E: Standard Error, C.R: Critical Ratio, *p: probability value*

As seen in the table above, results indicate that there is a positive relationship between leadership styles and project success (Beta=0.840, SE=0.90, CR=8.440). Thus, that hypothesis was supported. This means that positive changes in the leadership style are associated with positive changes in project success. In other words, when leaders adopt a suitable leadership style in projects such as communication and allow the participation of stakeholders, projects are completed on time, within the set cost while meeting quality specifications.

5. Discussion

5.1 Leadership style and project success

For a while, the debate on the success of government-funded construction projects has been on-going, earlier studies established factors like team effectiveness (Azmy, 2012), professional teamwork (Mungeria, 2012), and stakeholder engagement process (Bal et al., 2013) as key in influencing the success of government-funded construction projects. Yet attaining success remains a big challenge to most government construction projects specifically in developing countries like Uganda. The study findings, however, contribute to this debate by showing how leadership styles influence the success of government-funded construction projects in Uganda. Indeed, the study results revealed that there is a positive relationship between leadership styles and project success. This implies that leaders that adopt suitable leadership styles such as communication and participation during the implementation of projects realize project success. Drawing from the path-goal theory, these leaders are flexible; choose leadership styles that correspond to the project situation and nature of the stakeholders to achieve project success.

The above result is not surprising because Rana et al. (2019) already established that there is no single leadership style that fits all project situations. In line with this, Oyaya (2016) and Robbins (2001) alluded that government construction projects that post good results have leaders who keep interchanging leadership styles depending on the

project situations. In agreement, Zulch (2014) and Martin (2012) discovered that this increases stakeholders' motivation and zeal toward achieving set project goals. In addition, Olowoselu et al. (2019) and Bulti, (2016) discovered that adopting suitable leadership styles enhances stakeholders' empowerment and satisfaction, and the stakeholders' work effectiveness. Lategan and Fore (2017) noted that leadership is a skill that is different from other skills and most of these skills manifest in the style a leader adopts. Therefore, government construction project managers have the ability to persuade stakeholders by adopting suitable leadership styles depending on the situation always get the best results for projects (Acquah and Xing, 2021; Frigenti and Cormninos, 2002).

This finding lends support to the path-goal theory which posits that leaders that are flexible and adopt appropriate leadership styles are able to clarify and remove obstacles that stand in the path stakeholders take to attain their goals and organization goals. The theory notes that leaders who choose styles they are comfortable with that suit project situations and stakeholders always motivate stakeholders to accomplish set goals. In this study, it was confirmed that leadership styles especially participation and communication affect government construction project success.

6. Conclusion, Implications and future research direction

6.1 Conclusion

From the results of this study, it can be concluded that leadership styles contribute to government construction project success. More specifically when project leaders allow stakeholders' participation and communicate effectively about project tasks, goals, strategies, and processes they are able to enhance the stakeholders' levels of commitment, trust, and cooperation that enable them to execute timely, cost-effective, and quality government construction projects.

6.2 Implications

This study provides both theoretical, practical and policy implications. Theoretically, the study contributes to the adoption of path goal theory as adequate in studying government construction projects success as it sets the foundation for empirical evidence of the relationship between leadership styles (communication and participation) and government construction projects in Uganda success. Also, the study contributes to the body of literature concerning the relationship between leadership styles and government project success.

Practically for managers of government construction projects and stakeholders, since leadership styles contribute to government construction projects' success, project managers should ensure that there is adequate internal and external communication with stakeholders through the right channels to make project goals, benefits, and tasks clear, stakeholders and managers understand each other which limits on disagreements in projects that may delay projects. Secondly, there is a need to ensure openness and constant communication during project implementation to help a project transit smoothly from one project stage to another easier. The existence of clear and open communication limits waste reworks, and costly litigations as well as fosters stronger cooperation among stakeholders. Again, project managers should adopt leadership styles (communication and participation) that suit the nature of the project situation and stakeholders such as participation leadership that encourages delegation of authority, consultation, and joint decision-making, stakeholders and leaders strive hard to complete quality projects on time and within the set budget. Lastly, project managers should devise strategies to realize project success. This can be achieved by adopting communication and participation leadership styles that suit the nature of stakeholders and the project situation. Once this is in place stakeholders will become committed and cooperative and trust each other to deliver projects as planned.

Under Policy contributions, having established that leadership styles especially communication and participation contribute greatly to government construction projects success, governments through project implementation organs such as the Ministry of Works and Transport in uganda should put in place vibrant communication policies that ensure project managers and practitioners adequately share Information about the project among stakeholders through the stakeholders' desired channels to make project goals, benefits and tasks clear to limit on disagreements in projects that delay projects. This should happen concurrently with designing a strong policy towards stakeholders' inclusiveness in government construction projects.

Collective decision making involving all key stakeholders in construction projects can promote efficiency and proper resources allocation to achieve construction milestones. This may reduce on shoddy works and promote timely and certified construction project completion to eliminate resource wastage by controlling government development fund leakages. Also, government through the Ministry of Education and Sports should consider incorporating project practice and implementation literacy education in the secondary education curriculum. This will impart project knowledge and skills onto learners at an early stage. Additionally, the learners will develop a positive attitude towards projects. Furthermore, the National Council for Higher Education should encourage institutions of higher learning to introduce construction project education in their programmes.

6.3 Model that explains construction project success.

The second objective of this study was to develop a model that success of government funded projects. From the review of literature and path goal theory it was hypothesised that leadership styles especially communication and participation explain government

construction project success. This relationship is diagrammatically illustrated in Figure 4.

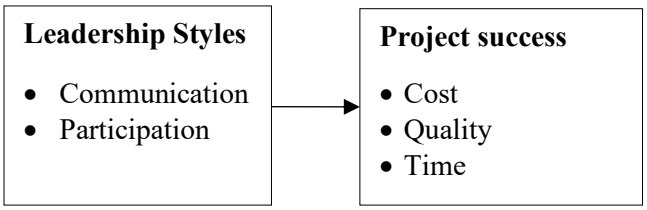

Figure 4: Model that explains Project Success

To generate a model that explains project success, structural equation modeling was conducted in order to confirm the hypothesised model in Figure 4. Responses in form of quantitative data were solicited from project stakeholders to capture their views on whether leadership styles especially communication and participation explain project success. Accordingly, a model that explains project success was developed as indicated in Figure 4. As seen in Figure 4 the model reveals that to realise project success project leaders need to adopt suitable leadership styles especially communication and participation leadership.

Specifically, with communication, project managers should ensure that Information about project is shared adequately among stakeholders. Under participation, project leaders should ensure project stakeholders participate in project design, participate in deciding the project site and also participate in deciding the time frame that project will take to realise project success. As such the path stakeholders take to realise project goals will be made easier. Also, the results revealed that government project success means adherence to project cost, time and quality as the case was in the hypothesised model (Figure 4). In terms of time project leaders who adopt suitable leadership styles should aim at meeting the set time frame for the project to be judged successful. In terms of quality measurement project success is means improvement in the performance of stakeholders, project outputs meeting stakeholder's expectations and ensuring that project comply with the set project requirements. In terms of quality project leaders should ensure that reliable project costs estimates are always set before commencement of the project; ensure that the total cost of the project is always below the authorised budget and lastly ensure that final budget for each phase of the project is essentially the same as planned.

6.4 Limitations and research direction

Despite the highlighted significant contributions of this research, it also presents some limitations and opportunities for future researchers. First, the study examined leadership styles in terms of participation and communication. Therefore, future research can examine leadership styles by focusing on laissez-faire, achievement-oriented leadership, and autocratic leadership. Also, the study has been conducted in a developing country, Uganda. Future research should look into the comparison between developed countries and less developed countries in this regard.

References

Acquah, T. A. A., & Xing, H. (2021). Female Leadership as a Moderator on Human Resource Flexibility Affecting Firm Performance. Journal of Human Resource Management, 9(3):94-101.

Ahimbisibwe, A., & Nangoli, S. (2012). Project communication, individual commitment, social networks, and perceived project performance", Journal of African Business, 13(2):101-114.

Akpoviroro, K.S., Kadiri, B. & Owotutu, S.O. (2018). Effect of participative leadership style on employee's productivity. International Journal of Economic Behavior (IJEB), 8(1):47-60.

Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological bulletin, 103(3):411.

Ani, G.J., Oliver, N.C., Okpala, P.U., Dyages, E.O., & Akese, M.I. (2017). Using the path-goal theory of leadership to enhance the administration of nursing care service. Journal of Harmonized Research in Management, 3(2):95-105.

Archibald, R., Di Filippo, I., & Di Filippo, D. (2012). The six-phase comprehensive project life cycle model. PM World Journal, 1(5):1-40.

Arnstein, S.R. (1969). A ladder of citizen participation. Journal of the American Institute of planners, 35(4):216-224.

Atencio, M. (2012). A critical success factors framework that includes leadership competencies for the successful delivery of projects. University of Salford (United Kingdom).

Atkinson, R. (1999). Project management: cost, time, and quality, two best guesses and a phenomenon, it's time to accept other success criteria. International journal of project management, 17(6):337-342.

Atsebeha, A. T. (2016). Principals' leadership styles and their effects on teachers' performance in the Tigray region of Ethiopia. University of South Africa: Pretoria, South Africa.

Avital, M., & Singh, B. (2007). The impact of collaboration and competition on project performance.

Azmy, N. (2012). The role of team effectiveness in construction project teams and project performance. Iowa State University.

Babirye, H., Tait, M. & Oosthuizen, N. (2022). Creating a suitable contract compliance environment in state departments in Uganda: A developing economy perspective. Journal of Contemporary Management, 19(1):381-411. [Online: https://doi.org/10.35683/jcm21049.152 downloaded on 16 November 2022].

Bajpai, S., & Bajpai, R. (2014). The goodness of measurement: Reliability and validity. International Journal of Medical Science and Public Health, 3(2):112-115.

Bal, M., Bryde, D., Fearon, D., & Ochieng, E. (2013). Stakeholder engagement: Achieving sustainability in the construction sector. Sustainability, 5(2):695-710.

Bilczynska Wojcik, A. (2014). Communication management within virtual teams in global projects (Doctoral dissertation, Dublin Business School).

Bogere, G., Kabasweka, F. G., Kayabwe, S., & Achola, I. (2014). Assessing Public Expenditure Governance in Uganda's Road Sector: Application of an Innovative Framework.

Bryman, A., & Bell, E. (2014). Research methodology: Business and management contexts. Oxford University Press Southern Africa.

Chan, A.P.C. (2003). Framework for measuring the success of construction projects. Available: https://eprints.qut.edu.au/26531/1/2001-003-C1_Framework_for_Measuring_Success.pdf downloaded on 1 November 2021

Cho, E., & Kim, S. (2015). Cronbach's coefficient alpha:Well-known but poorly understood. . Organizational research methods, 18 (2): 207-230.

Civil Society Budget Advocacy Group.(2018). Cso position paper on the works and transport sector budget fy2018/19.Available:http://csbag.org/wp-content/uploads/2018/05/CSO-position-paper-on Works-and-Transport-Sector-Budget-Ministerial-Policy-Statement-FY-2018-19.pdf.

Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. Corporate reputation review, 10, 163-176.

Creswell, J. W. (2011). Controversies in mixed methods research. The Sage handbook of qualitative research, 4(1), 269-284.

Creswell, J. W., (2014). Research design: qualitative, quantitative, and mixed methods Approaches. 4th ed. Thousand Oaks, California, USA: SAGE Publications, Inc.

Daniel, E.U., Maxwell, A.O., Mercy, E.O. & Tolulope, M, A. (2019). Achieving Zero Waste Operation in a Private Organisation through Extended Stakeholders Consultation: A Case in the Niger Delta Region, Nigeria. International Journal of Mechanical Engineering and Technology, 10(2):155-168.

Dwivedi, R., & Dwivedi, P. (2021). Role of stakeholders in project success: theoretical background and approach. International Journal of Finance, Insurance and Risk Management XI (1), 38-49.

Dolatabadi, H. R., & Safa, M. (2010). The effect of the directive and participative leadership style on employees' commitment to service quality. International Bulletin of Business Administration, 9(1):31-42.

Doloi, H. (2009). Relational partnerships: the importance of communication, trust and confidence and joint risk management in achieving project success. Construction Management and Economics, 27(11):1099-1109.

Engelbrecht, J., Johnston, K. A., & Hooper, V. (2017). The influence of business managers' IT competence on IT project success. International journal of project management, 35(6), 994-1005.

Famakin, I. O., & Abisuga, A. O. (2016). Effect of path-goal leadership styles on the commitment of employees on construction projects. International Journal of construction Management, 16(1) :67-76.

Field, A. P. (2009). Discovering statistics using SPSS. London, England: SAGE.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research, 18(1):39-50.

Freeman, R. E. (1984). Strategic management: a stakeholder approach. Boston: Pitman Publishing. (1, 4).

Frigenti, E. & Comninos. (2002). The practice in project management: a guide to the business focuses approach. Kogan Page Publishers

Goldhaber, G. M., & Rogers, D. P. (1979). Auditing organizational communication systems: The ICA communication audit. Kendall/Hunt Publishing Company.

Grimm, R. (2018). The link between leadership style and job satisfaction in the DON civilian workforce.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). Multivariate data analysis. 7th ed. Englewood Cliffs: Prentice Hall.

Henseler, J., Ringle, C. M. & Sarstedt, M. (2015). 'A new criterion for assessing discriminant validity in variance-based structural equation modeling, Journal of the Academy of Marketing Science, 43(1):115–135.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European business review, 31(1), 2-24.

Hersey, P. & Blanchard, K, H. (1982). 'Leadership style: Attitudes and behaviors', Training and Development Journal, 36, 50–52.

House, R.J., & Mitchell, T.R. (1975). The path-goal theory of leadership (No. TR-75-67). Washington university of Seattle department of psychology.

House, R.J. (1996). The path-goal theory of leadership: Lessons, legacy, and a reformulated theory. The leadership quarterly, 7(3):323-352.

Jong, C.Y., Sim, A.K., & Lew, T.Y. (2019). The relationship between TQM and project performance: Empirical evidence from the Malaysian construction industry. Cogent Business & Management, 6(1), 1568655.

Kanungo, R.N. (1982). Measurement of job and work involvement. Journal of applied psychology, 67(3):341.

Kariuki, J. T. (2015). Project manager leadership style, teamwork, Project characteristics and performance of Water projects in Kenya (Doctoral dissertation, University of Nairobi).

Kemper, E.A., Springfield, S. & Teddlie, C. (2003). Mixed methods sampling strategies in social science research. In Handbook of mixed methods in social and behavioral research, ed. A. Tashakkori, and C. Teddlie, 273–296. Thousand Oaks, CA: Sage.

Kiplangat, H.K., (2017). The Relationship between Leadership Styles and Lecturers' Job Satisfaction in Institutions of Higher Learning in Kenya. Universal Journal of Educational Research, 5(3):435-446.

Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. Educational and psychological
measurement, 30(3):607-610.

Krick, T., Forstater, M., Monaghan & Sillanpaa, M. (2005). From words to action, the stakeholder engagement

manual, Volume 2: The practitioner's handbook on stakeholder engagement, Accountability, United Nations Environment Programme, Stakeholder Research Associates.

Kwofie, T. E., Fugar, F., & Adinyira, E. (2015). Contribution of multiple construction site management features to project team communication effectiveness: The case of mass housing projects. Engineering Project Organization Journal, 5(4):180-193.

Lategan, T., & Fore, S. (2015). The impact of leadership styles on project success: case of a telecommunications company. Journal of Governance and Regulation.

Leenders, R. T. A., Van Engelen, J. M., & Kratzer, J. (2003). Virtuality, communication, and new product team creativity: a social network perspective. Journal of Engineering and technology management, 20(1-2), 69-92.

Liphadzi, M., Aigbavboa, C., & Thwala, W. (2015). Relationship between leadership styles and project success in the South Africa construction industry. Procedia Engineering, 123, 284-290.

Maame, A.W.A. (2012). An assessment of Project Communication Management on Construction Projects in Ghana. Executive masters. Kwame Nkrumah University of Science and Technology.

Marshall, G., & Jonker, L. (2011). An introduction to inferential statistics: A review and practical guide. Radiography, 17(1):1-6.

Martin, R. (2012). The path-goal theory of leadership. Encyclopaedia of Group Processes and Intergroup Relations Levine, J.M. & Hogg, M.A. (Eds.). Thousand Oaks, CA: Sage, 636-637.

Mezgebu, H. W. (2012). The role of communication in managing projects: case study: Umeå 2014 European capital of culture.

Monzani, L., Ripoll, P., & Peiró, J. M. (2015). The moderator role of followers' personality traits in the relations between leadership styles, two types of task performance and work result satisfaction. European Journal of Work and Organizational Psychology, 24(3):444-461.

Morse, J. M. (2000). Determining sample size. Qualitative health research, 10(1):3-5.

Mugo, K. M., & Moronge, M. (2018). Influence of organizational communication on implementation of building projects in Nairobi City County, Kenya. Strategic Journal of Business and Change Management, 5(2), 1144-1183.

Mungeria, K. (2012). Professional teamwork and project performance in the building construction industry in Kenya (Doctoral dissertation).

Musekura, R.(2013). Leadership styles &project success in the not for profit health sector organisations: a case study of selected donor funded health projects in Uganda. Master's thesis. Uganda Management Institute, Uganda.

Muszynska, K. (2015). Communication management in project teams – practices & patterns'. In Proceedings of the Make Learn &TIIM Joint International Conference, Bari, Italy, May 29-30, 2015. To Know Press, Bangkok, Thailand/ Celje, Slovenia / Lublin, Poland, 1359-1366.

Mwaisaka, D.M. (2019). Influence of Path-Goal Leadership Style on Employee Job Satisfaction in Commercial Banks in Kenya (Doctoral dissertation, United States International University- Africa).

Mwaisaka, D.M., Ouma, C., & K'Aol, G. (2019). Influence of supportive leadership style on employee job satisfaction in commercial banks in Kenya. Journal of Human Resource and Leadership, 4(1):44-66.

Mwesigwa, R., Ntayi, J., Bagire, V. & Munene, J.C.(2018). Stakeholder behavior, relationship building practices and stakeholder management in Public Private Partnership Projects in Uganda. Makerere Business Journal, 14(1/2):1-21.

Nakato, J. (2019). Employee talent management in the Uganda health sector: a public institutions perspective. Unpublished Doctoral thesis. Nelson Mandela University, Port Elizabeth, South Africa.

Nangoli, S., Namiyingo, S., Kabagambe, L., Namono, R., Jaaza, M. & Ngoma, M. 2016. Stakeholder participation: An empirical investigation, African Journal of Business Management, 10(8):182-186.

Nangoli, S. (2010). Project communication, individual commitment, social networks and perceived project performance: A study of citizenship projects in selected commercial banks.MBA thesis, Makerere University, Kampala. Retrieved from: http://makir.mak.ac.ug/handle/10570/2397.

Ndifuna, M.F. (2015). Social Networks, Stakeholder involvement and performance of poverty eradication projects in Uganda: The case of NAADS Projects in Jinja District. Masters of Business Administration. Makerere University, Uganda.

Nemaei, B. (2012). The Impact of participative leadership on employee's motivation, job satisfaction and innovation (Doctoral dissertation, The British University in Dubai (BUiD).

Northouse, P. (2016). Leadership Theory and Practice. Thousand Oaks, CA: Sage.

Nsereko, I., Balunywa, W., Munene, J., Orobia, L. & Muhammed, N. (2018). Personal initiative: Its power in social entrepreneurial venture creation, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, (5):1-15. [Available: http://dx.doi.org/10.1080/23311975.2018.1443686 downloaded on 1 November 2022].

Nunnally, Jum C. (1967), Psychometric Theory, 1st ed., New York: McGraw-Hill.

Office of Auditor General. (2018). Report of the Auditor General to Parliament for the financial year ended 30th JUNE 2018. Available: http://www.oag.go.ug/wp-content/uploads/2019/01/Report-of-the-AuditorGeneral-to-Parliament-for-the-FY-ended-30-June-2018.pdf.

Office of Auditor General. (2017). Annual Report of the Auditor General on the results Of Audits for theyear2017.Available:http://www.oag. go.ug/wpcontent/uploads/2018/01/Annual-Report-of-the-Auditor-General-FY-2017.pdf (Accessed:24 May 2023).

Ofori, D.F. (2013). Project management practices and critical success factors-A developing country perspective. International Journal of Business and Management, 8(21), 14.

Olowoselu, A., bin Mohamad, M. A., & Mohamed Farag Mohamed Aboudahr, S. (2019). Path goal theory and the application in educational management and leadership. Education Quarterly Reviews, 2(2): 448-455.

Olsson, B., & Johannsson. (2011). Projects as communication system: Creating a culture of innovation and culture. Journal of International System, (31): 30-37.

Onencan, J. (2020). Investigating the effect of procurement procedures on performance of construction projects in Uganda (Doctoral dissertation, Makerere University).

Owoo, N. S., & Lambon-Quayefio, M. P. (2018). The role of the construction sector in Ghana (No. 2018/119). WIDER Working Paper.

Oyaya, W. (2016). Influence of Leadership Style on Performance of Construction Projects: A Case of Housing Projects in Westlands Sub- County, Nairobi, Kenya (Doctoral dissertation, University of Nairobi).

Pinsonneault, A., & Kraemer, K. (1993). Survey research methodology in management information systems: an assessment. Journal of management information systems, 10(2):75-105.

Polit, D.F. & Beck, C.T. (2012). Nursing research: Generating and assessing evidence for nursing practice. Philadelphia, PA: Lippincott Williams and Wilkins.

Pollack, J., Helm, J., & Adler, D. (2018). What is the Iron Triangle, and how has it changed? International journal of managing projects in business. 11(2): 527-547.

Rana, R., Ka'ol, G., & Kirubi, M. (2019). Effect of participative leadership style on employee performance of coffee trading companies in Kenya. Journal of Human Resource and Leadership, 4(2), 29-57.

Robbins, S. (2001). Organization behavior: Leading and managing. Wellington: Prentice Hall.

Roberts, O. I., & Okereke, C. I. (2017). Cultural beliefs on waste and the need for integration into present domestic waste management: evidence from selected communities in rivers state, Nigeria. International Journal of Social Science & Management Research, 3(6), 1-12.

Rok, B. (2009). Ethical context of the participative leadership model: taking people into account. Corporate Governance: The international journal of business in society,9(4):461-472.

Rüzgar, N. (2018). The effect of leaders' adoption of task-oriented or relationship-oriented leadership style on leader-member exchange (LMX), in the organizations that are active in the service sector: A research on tourism agencies. Journal of Business Administration Research, 7(1):50-60.

Safapour, E., Kermanshachi, S., Kamalirad, S., & Tran, D. (2019). Identifying effective project-based communication indicators within primary and secondary stakeholders in construction projects. Journal of Legal Affairs and Dispute Resolution in Engineering and Construction, 11(4), 04519028.

Saha, S., & Kumar, S. P. (2017). Influence of participation in decision making on job satisfaction, group learning, and group commitment: Empirical study of public sector undertakings in India. Asian Academy of Management Journal, 22(1):79–101.

Saunders, M., Lewis, P., & Thornhill, A. (2007). Research methods for business students. 4th. Harlow, Essex: Pearson.

Shah, R.K.(2016). 'An Exploration of Causes for Delay &Cost Overruns In Construction Projects: Case Study of Australia, Malaysia and Ghana', Journal of Advanced College of Engineering & Management, 2:41-55.

Sharma, G. (2017). Pros and cons of different sampling techniques. International journal of applied research, 3(7):749-752.

Sinkovics, R.R., & Alfoldi, E.A. (2012). Progressive focusing and trustworthiness in qualitative research. Management International Review, 52(6):817-845.

Somech, A. (2005). Directive versus participative leadership: Two complementary approaches to managing school effectiveness. Educational administration quarterly, 41(5):777-800.

Sunindijo, R. Y. (2015). Project manager skills for improving project performance. International Journal of Business Performance Management, 16(1):67-83.

Taylor, H.S. (2018). Participative Leadership and Project success. Doctor of Business Administration. Liberty University School of Business.

Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis.

Watt, A. (2014). Project management. Available: https://app.livecarta.com/catalog/preview/project – Management.

Williams, R. & Walton, A. 2013. The social licence to operate and coal seam gas development.

Warsame AO (2021) Towards genetic mapping of nutritional quality traits in faba bean (Vicia faba L). Ph.D. thesis, University of Reading. Canberra: CSIRO.

Wu, G., Liu, C., Zhao, X., & Zuo, J. (2017). Investigating the relationship between communication-conflict interaction and project success among construction project teams. International Journal of Project Management, 35(8), 1466-1482.

Yukl, G. (2006). Leadership in organizations, 6th edition. Upper Saddle River, NJ: Prentice Hall.

Zikmund, W. G., Babin, B. J., Carr, J. C. & Griffin, M. (2009). Business Research Methods. 8thed. New Castle: South-Western College Pub.

Zulch, B. (2014). Leadership communication in project management. Procedia-Social and Behavioral Sciences, 119:172-181.

Appendix 1: **Exploratory Factor Analysis for Leadership Styles (Rotated component matrix)**

Item scale		communication	participation
LDCM1	Information concerning project activities is always shared to project stakeholders	.777	
LDCM2	The language used in project correspondences is familiar to all project stakeholders	.572	
LDCM3	The channel used to share information is liked by all project stakeholders	.625	
LDCM 4	New project Information usually circulates amongst project stakeholders on time	.595	
LDCM8	Meetings are held to share information regarding performance of project tasks	.796	
LDCM9	Information about project progress is always shared among project members	.585	
LDCM11	Project targets are always explained to project stakeholders in a meaningful way	.639	
LDCM13	Sharing of information has improved commitment among project stakeholders	.589	
LDCM15	The project information provided clearly indicates the roles and responsibilities of each stakeholder	.526	
LDCM 5	There are reliable avenues for receiving reactions about project activities from project stakeholders	.322	
LDCM 6	Opinions from project stakeholders are always given attention	.124	
LDCM 7	Reactions from project stakeholders are always given attention	.452	
LDCM10	Interactions amongst project stakeholders is guided by a communication policy	.278	
LDCM 12	Sharing of information has resulted into improved cooperation among project stakeholders	.301	
LDCM 14	Sharing of information has improved the level of trust among project stakeholders	.426	
LDCM16	Sharing information among stakeholders improves performance of projects	.311	
LDPT1	Project stakeholders are always asked for suggestions on how to carry out project assignments		.567
LDPT2	Project stakeholders participate in project design.		.554
LDPT7	Project supervisors/ leaders do not require project stakeholders to get their input or approval before making decisions		.511
LDPT10	Project stakeholders participate in deciding the project site.		.526
LDPT11	Project stakeholders participate in deciding the time frame for the project.		.512
LDPT13	Project stakeholders participate in deciding the sanction measures for the project misuse.		.608
LDPT17	Project stakeholders participation has improved the level of cooperation among project stakeholders		.670
LDPT18	Project stakeholder's participation contributes to project success		.624
LDPT3	Project stakeholders participate in needs identification for the project.		.434

LDPT4	Project stakeholders participate in the monitoring and evaluation of the project.	.034
LDPT5	Project stakeholders are left to make decisions on their own without consulting their leaders.	.345
LDPT6	Duties and tasks are delegated amongst project stakeholders according to the capacity of each project stakeholder	.278
LDPT 8	Project supervisors/leaders permit project stakeholders to get the necessary information from them and then make decisions on their own.	.389
LDPT 9	Project stakeholders are involved in making decisions on how project tasks and duties should be performed	.287
LDPT12	Project stakeholders participate in deciding the budget for the project	.345
LDPT14	Project stakeholders participate in deciding the sanctions imposed for not participating in project maintenance.	.456
LDPT15	Project stakeholders' participation has improved on their commitment towards projects	.326
LDPT16	Project stakeholders' participation has improved the level of trust among project stakeholders	.434

Appendix 2: Exploratory Factor Analysis results for Project Success (Rotated component matrix)

Eigen Value	13.393	7.429	
Variance %	39.391	21.849	
Cumulative %	39.391	61.240	

Item scales		time	cost	quality
PSTM1	Reliable time estimates are often set ahead of project	.705		
PSTM2	Project stakeholders are always committed to beating set deadlines	.733		
PSTM4	The project was completed on schedule	.862		
PSTM5	Necessary project information is provided to stakeholders on time	.886		
PSTM3	Project activities from initiation to closure are always timely	.478		
PSCO1	The actual total cost of the project was significantly under authorized budget		.607	
PSCO3	Reliable cost estimates are often set before project implementation		.580	
PSCO4	The cost objectives were met for the project		.836	
PSCO2	The final budget for each phase of the project was essentially the same as planned		.701	
PSQU1	Projects outputs have greatly improved the livelihood of many stakeholders			.803
PSQU2	The project's deliverables complied with the set requirements			.605
PSQU4	The project's output meets stakeholders' expectations			.513
PSQU5	The project improved performance for stakeholders			.624
PSQU6	Project end product is accepted and used by the stakeholders for whom the project is intended			.588
PSQU3	The quality of the project targets achieved is always high			.403
PSQU6	Project end product is accepted and used by the stakeholders for whom the project is intended			.098
Eigen Value		3.666	1.874	1.606
Variance %		45.830	11.711	10.036
Cumulative %		45.830	57.541	67.577