JOURNAL LA MULTIAPP

VOL. 05, ISSUE 05 (740-758), 2024
DOI: 10.37899/journallamultiapp.v5i5.1661

Approach to Weighting the Success Criteria of Toll Road Project of Government Cooperation with Business Entities Procurement Model

Iman Hidayat[1], Asep Suhana[1], Hetty Padriani[1]

[1]*Civil Engineering Study Program, Sekolah Tinggi Teknologi Mandala, Jln Soekarno-Hatta 597 Bandung*

**Corresponding Author: Iman Hidayat*
Email: asuhana1963@gmail.com

Article Info

Article history:
Received 25 September 2024
Received in revised form 16 October 2024
Accepted 5 November 2024

Keywords:
Project Success Criteria
Critical Success Factors
Development Strategy

Abstract

In providing funding for toll road development projects, many developing countries are im-plementing PPP pro-curement schemes including Indonesia. This funding scheme is believed to be an innovative procurement process model and has good prospects for the future of the construc-tion industry in the world. However, in its implementation, the Indonesian government is currently faced with various problems that have the potential to have a negative impact on the management and development of toll roads in Indo-nesia. Therefore, the main objective of this research is to develop a method of evaluating the success of PPP-themed toll road projects and determining the current and future strategy of PPP-themed toll road development projects. Methodology This research, using an exploratory sequential mixed methods approach, involves four stages of research. Through a Systematic Literature Review (SLR) of reputable scientific journals from various countries, a questionnaire survey was developed. The survey results were analyzed using multivariate statistical methods with the help of Par-tial Least square analysis software (PLS-SEM), analytical hierarchy process (AHP) and Relative Importance Index (RII) methods. The results of this research found 20 critical success indicators and four dimensions of project success. This study produces a new way to assess the success of PPP-themed toll road projects that is very important and can inspire the government in making policies, legislation and regulations as well as innovative strategies in develop-ing PPP-themed toll roads.

Introduction

The Indonesian government has contributed significantly to infrastructure development, especially toll roads. The construction of toll roads is expected to provide easy access across regions and increase the efficiency of goods distribution costs to support economic growth. One of the strategies designed to obtain funding sources, the government has now adopted the Public Private Partnership (PPP) procurement model. This cooperation model has been used by most developing countries (Kavishe et al., 2019; Liu et al., 2016). PPP is an alterna-tive and innovative procurement model that offers good prospects for the future of the global construction industry (Osei-Kyei & Chan, 2017). Although the PPP model is a good procurement model, in its implementation, the Indonesian government is currently faced with various problems that have the potential to have a negative impact on the management and development of toll roads, including land acquisition issues, planning readiness, work accidents, time delays and project cost overruns and environmental disturbances. This is a chal-

ISSN: 2716-3865 (Print), 2721-1290 (Online)

lenge in itself to determine how to determine the weight of criteria to evaluate the success of PPP procurement model toll road projects.

Project success needs to be evaluated with appropriate criteria and measurement methods (Davis, 2017), as project success is the basis for managing and controlling current projects as well as for planning and orienting future projects. In order to evaluate project success there must be a distinction between project management success and project success as these are two closely related concepts, but there are significant differences (Khalifeh et al., 2020; Imam & Zaheer, 2021). Project management suc-cess focuses on the project process and predetermined constraints such as time, cost and qual-ity and is measured against short-term goals, while project success is measured against long-term goals, focusing on the impact of the complete project outcome. So that to evaluate pro-ject success, many aspects must be taken into account which cannot be separated (Castro et al., 2019; Jarrah et al., 2022; Ika & Donnelly, 2017).

To evaluate project success, project success factors and criteria have been widely accepted in the literature as two fundamental components, which are measures of project success (Ahmadabadi & Heravi, 2019; Stanitsas et al., 2021; Al-varenga et al, 2019). Based on a review of reputable journals from various countries, several studies have identified project success criteria (Alvarenga et al., 2019; Gunawan & Roy, 2023; Hansen et al., 2021; Turner & Xue, 2018). And many other studies identified critical success factors (CSFs) (Chou & Pramudawardhani, 2015; Meng & Boyd, 2017; Volden & Welde, 2022). However, the results of these studies lack comprehensiveness and only pro-duce ambiguous concepts. Here it is clear that the researchers have no common concept of project success. In addition, none of the results of previous studies have produced an index or weighting of project success criteria so that the results of previous studies are very difficult to use as a basis for evaluating project success. Therefore, the purpose of this study, not only to fill the gap in the existing literature, but furthermore, by developing a comprehensive frame work for assessing the success of toll road projects PPP procurement model. The results of this study produce a new way to evaluate project success which is very important, in evaluating project success both in the short and long term.

Methods

The main objective of this research is to develop a method for evaluating the success of toll road projects under the PPP procurement model, involving three research steps.

Step one

Identifying project success factors and criteria using an exploratory sequential mixed methods approach. According to Creswell & Clark (2017) and Khoo-Lattimore et al. (2019), sequential mixed methods are appropriate when a phenomenon has not been conceptualized, explored in depth in the literature. Through Systematic Literature Review (SLR) of reputable scientific journals from various countries, it will result in the identification of factors and criteria for project success. Followed by quantitative analysis to obtain interpretations from experts, practitioners and ac-ademics who have sufficient knowledge and experience about project success. To obtain the validity and reliability of the data, Guttman scale analysis was used, and to obtain the level of importance, Relative Importance Index (RII) was analyzed.

Step two

To obtain the causal relationship between project success factors and project suc-cess criteria, based on the findings from the first step, a stage 2 questionnaire was developed containing statements about project success criteria and factors measured on a five-point Lik-ert scale. The data from the questionnaire survey were analyzed using multivariate statistical methods with the help of Partial Least square analysis software (PLS-SEM). According to Hair Jr et

ISSN: 2716-3865 (Print), 2721-1290 (Online)

al. (2021), PLS-SEM is suitable for use in situations when the analysis is related to testing the theoretical framework from a prediction perspective and the structural model is complex (Shmueli et al., 2019; Ghasemy et al., 2020; Hair & Alamer, 2022). In addition to PLS SEM, the Relative Importance Index (RII) method is used to rank the influence of project success indicators on project success criteria.

Step three

To obtain the weight of project success criteria as a basis for evaluating the success of PPP-themed toll road projects, starting with developing the findings from step 2, into a hierarchical model followed by making a stage 3 questionnaire with a nine-point scale. To de-termine the weight of the criteria, the results of the questionnaire data were analyzed using the analytical hierarchy process (AHP) method with the help of Expert Choice 11 software. And to determine the weight of the sub-criteria, data on the ranking results of the influence of project success indicators on project success criteria were used.

Results and Discussion

Research Data Analysis

Based on the results of the Systematic Literature Review (SLR) of scientific journals from various countries, 49 indicators were found which researchers divided into 8 project success factors. Given that only a few previous studies have discussed project success criteria, therefore with limited literature and there is still no common concept about project success criteria, researchers consider project success criteria based on the essence of the concept by summarizing project success criteria into; Project Management Success, Impact on stakeholders, Meeting Strategic Organizational and Business Goals and Sustainability.

Based on the results of the distribution of stage 1 questionnaires through google form, 55 respondents' answers were collected, then the data analysis was divided into two parts, namely, validity and reliability tests of the Guttman scale and important level analysis.

Guttman Scale Validity and Reliability Test

There are two parameters that must be measured to validate the Gutmann scale questionnaire survey, namely, the Coefficient of Reproducibility and the Coefficient of Scalability. The requirement for acceptance of the reproducibility coefficient value is if the reproducibility coefficient has a value> 0.90, calculated by the formula:

$$K_r = 1 - \left(\frac{e}{n}\right) \quad (1)$$

Where:

Kr = Reproducibility Coefficient; e = amount of error / error value = 48; n = number of statements multiplied by the number of respondents = 3025

$$K_r = 1 - \left(\frac{48}{3025}\right) = 0{,}984 > 0{,}90$$

The requirement for acceptance of the scalability coefficient value is if the scalability coefficient has a value> 0.60.

$$K_s = 1 - \left(\frac{e}{x}\right) \quad (2)$$

Where:

Ks = Scalability Coefficient; e = Number of error values = 48; x = 0.5 ({number of statements times number of respondents} - number of answer options) = 1485.

ISSN: 2716-3865 (Print), 2721-1290 (Online)

$$K_s=1-\left(\frac{48}{1485}\right)=0,968>0,6$$

Guttman Scale Reliability Test

The assessment criteria if an instrument is said to be reliable if the KR-20 reliability coefficient value is more than 0.70 (r> 0.70). The Kuder-Richardson test results are as follows:

$$r=\frac{k}{(k-1)}\left(\frac{S^2-\sum pq}{S^2}\right) \quad (3)$$

Where:

r = Reliability of the test as a whole; ∑pq = Sum of the product of p and q = 0.825; k = Number of items = 55; S^2 = Variance of total score = 3.47

$$r=\frac{55}{(55-1)}\left(\frac{3,47-0,825}{3,47}\right)=0,776>0,7$$

Based on the validity and reliability tests of respondents' answers, the answers are valid and reliable.

Important level of analysis

To get the level of importance of factors and criteria for project success, the Relative Importance Index (RII) method is used.

Table 1. Relative Importance Index (RII) Respondents' Answers

Factor	Code	RII	Importance level
1. Planning and Design Factors	PD		
Project definition and objectives	PD1	1.00	High (H)
Project feasibility study and	PD2	1.00	High (H)
Land acquisition	PD3	0.98	High (H)
Project plan development strategy	PD4	0.98	High (H)
Initial project cost planning	PD5	1.00	High (H)
Detailed project time schedule	PD6	1.00	High (H)
Scope, drawings and specifications	PD7	1.00	High (H)
2. Procurement Factors	PROC		
Transparency and adequacy of funding	PROC1	0.94	High (H)
Effective procurement methods	PROC2	1.00	High (H)
Comprehensive contract documentation	PROC3	1.00	High (H)
Contract procedures and arrangements	PROC4	0.98	High (H)
3. Project Management Factors	PM		
innovative project management	PM1	1.00	High (H)
Communication and coordination	PM2	1.00	High (H)
Quality standards and scope	PM3	0.98	High (H)
meet time targets	PM4	0.98	High (H)
Meet the budget	PM5	0.98	High (H)
Project control and evaluation	PM6	0.96	High (H)
Risk management	PM7	0.98	High (H)
Changes and new technologies	PM8	1.00	High (H)
4. HR Factors	HR		
Project manager experience	HR1	0.98	High (H)
Decision-making, and conflict resolution skills	HR2	1.00	High (H)
Project manager authority	SDM3	0.98	High (H)
Competence and experience of team members	HR4	1.00	High (H)

ISSN: 2716-3865 (Print), 2721-1290 (Online)

Project prioritization and Clarity of roles and responsibilities of the project team	SDM5	0.98	High (H)
Education and Training	SDM6	0.98	High (H)
5. Stakeholder Management Factors	STH		
Stakeholder Management	STH1	0.98	High (H)
Top management involvement, commitment and support	STH2	1.00	High (H)
Decision-making ability	STH3	0.98	High (H)
Commitment of project participants	STH4	1.00	High (H)
Stakeholder satisfaction	STH5	0.98	High (H)
6. Contractor Factor	CON		
Contractor competence and experience	CON1	0.98	High (H)
Financial capability of the contractor	CON2	0.98	High (H)
Allocation of all resources	CON3	1.00	High (H)
Project scheduling and control	CON4	1.00	High (H)
OHS Control	CON5	1.00	High (H)
Contractual legal liability	CON6	0.98	High (H)
7. Business Factors	BIS		
Government commitment and support	BIS1	1.00	High (H)
Political, social and economic environment	BIS2	0.98	High (H)
Macroeconomic stability	BIS3	0.98	High (H)
Community support and engagement	BIS4	1.00	High (H)
Appropriate risk allocation and sharing	BIS5	0.96	High (H)
Availability of financial markets	BIS6	0.92	High (H)
Appropriate regulatory and legal framework	BIS7	0.98	High (H)
Good governance	BIS8	1.00	High (H)
8. Sustainability Factors	*SUS*		
Integration of sustainability into project management practices	SUS1	0.98	High (H)
Environmental resource saving policy	SUS2	1.00	High (H)
Environmental Performance Monitoring	SUS3	0.96	High (H)
Assessment of costs and benefits	SUS4	0.96	High (H)
Project impacts on communities and the environment	SUS5	0.98	High (H)
Project Success Criteria	SC		
Project management success criteria	SC1	1.00	High (H)
Criteria for impact on stakeholders	SC2	0.96	High (H)
Criteria for the organization's strategic objectives	SC3	0.96	High (H)
Sustainability Criteria	SC4	0.98	High (H)

Based on the results of the analysis, the important level is at a high level. Thus the statements submitted by researchers as many as 49 indicators of project success and 4 criteria for project success, can already represent the perceptions of experts, academics and practitioners in the field of construction and are eligible to be used as research analysis data.

Evaluation Model of Project Success Factors and Criteria

This research model contains 9 latent variables according to the model specifications shown in Figure 1.

ISSN: 2716-3865 (Print), 2721-1290 (Online)

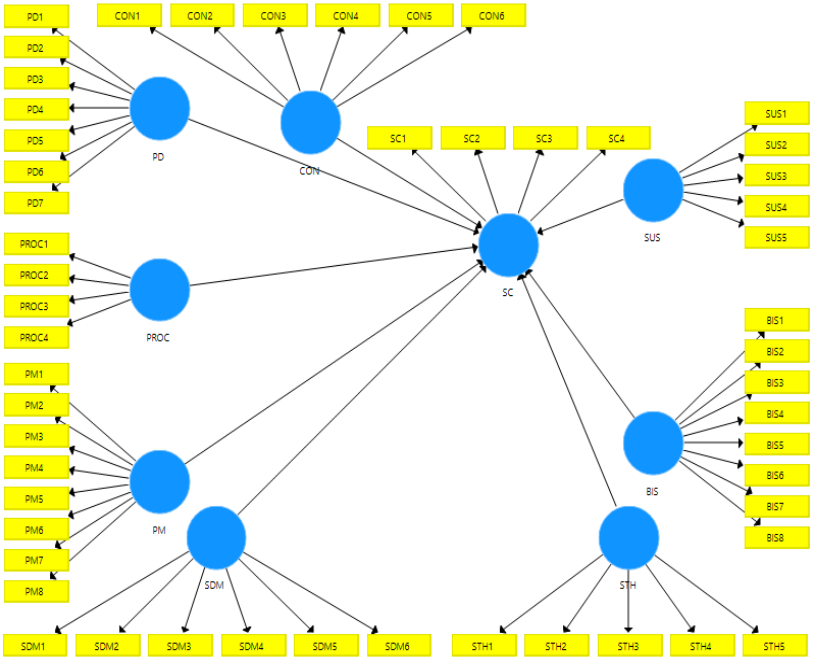

Figure 1. Model Specifications

Model specifications, showing the relationship between latent variables and their indicators which are reflective in nature as the basis for analysis. Based on the results of the stage 2 questionnaire through google form, 285 respondents' answers were collected, then the questionnaire data were analyzed using PLS-SEM. Partial Least Square functions can be grouped into 2 parts, namely the measurement model (outer model) and the Structural model (inner model). The outer model evaluation is more towards validity and reliability tests, while the inner model test is more towards regression, which describes how the causal relationship between project success factors and project success criteria.

Evaluation of the reflective measurement model (outer model). according to (Hair Jr et al., 2021) includes Convergent validity and Discriminant validity. Convergent Validity: measures the validity of each indicator against its latent variable, using measuring instruments, outer loadings and average variance extracted (AVE). While Discriminant Validity: measures the extent to which a construct is truly different from other constructs using measuring instruments, cross loadings, Heterotrait-Monotriat Ratio Of Correlations (HTMT) and using the square root of the AVE Fornell-Larcker Criterion.

Measurement model (Outer Model)

Convergent and Discriminant validity

Table 2, shows the Convergent validity test which results in all constructs being valid by having an outer loading value> 0.7 and an AVE value> 0.5, which means that in terms of outer loading and AVE values, all constructs have met the required Convergent validity. Based on the results of the root test of AVE (Fornell-Larcker Criterion), it is obtained that all the roots of the AVE of each construct are greater than the correlation with other variables so that it can be concluded that all constructs in this PLS model have met the Discriminant Validity requirements.

Table 2. Convergent and Discriminant validity

Construct	Indicator	Loading	AVE Value	Fornell Larcker Test
Planning and Design (PD)			0,797	0,893
	PD1	0,911		
	PD2	0,910		

ISSN: 2716-3865 (Print), 2721-1290 (Online)

	PD3	0,908		
	PD4	0,863		
	PD5	0,888		
	PD6	0,897		
	PD7	0,87		
Procurement Process (*PROC*)			0,832	0,912
	PROC1	0,918		
	PROC2	0,910		
	PROC3	0,929		
	PROC4	0,891		
Project Management (PM)			0,824	0,908
	PM1	0,889		
	PM2	0,906		
	PM3	0,904		
	PM4	0,922		
	PM5	0,916		
	PM6	0,914		
	PM7	0,912		
	PM8	0,898		
Human Resources (HR)			0,833	0,913
	HR1	0,901		
	HR2	0,927		
	SDM3	0,902		
	HR4	0,896		
	SDM5	0,929		
	SDM6	0,923		
STH Stakeholders)			0,842	0,917
	STH1	0,925		
	STH2	0,925		
	STH3	0,897		
	STH4	0,910		
	STH5	0,929		
Contractor (CON)			0,804	0,897
	CON1	0,876		
	CON2	0,908		
	CON3	0,896		
	CON4	0,908		
	CON5	0,904		
	CON6	0,889		
Business (BIS)			0,808	0,899
	BIS1	0,883		
	BIS2	0,888		
	BIS3	0,877		
	BIS4	0,923		
	BIS5	0,903		
	BIS6	0,904		
	BIS7	0,917		
	BIS8	0,895		
Sustainability (SUS)			0,823	0,907
	SUS1	0,905		

ISSN: 2716-3865 (Print), 2721-1290 (Online)

	SUS2	0,926		
	SUS3	0,896		
	SUS4	0,915		
	SUS5	0,893		
Project Success Criteria (SC)			0,860	0,927
	SC1	0,918		
	SC2	0,930		
	SC3	0,932		
	SC4	0,928		

Although the research data has met the requirements of Convergent and Discriminant validity, some experts argue that cross loading and root AVE (Fornell Larcker Criterion) are less sensitive in assessing Discriminant validity. As an alternative, the Heterotrait-Monotriat Ratio Of Correlations (HTMT) value must be less than 0.9.

Table 3. Heterotrait-Monotrait Ratio (HTMT) between Latent Constructs

	BIS	**CON**	**PD**	**PM**	**PROC**	**SC**	**HR**	**STH**
BIS								
CON	0,723							
PD	0,824	0,743						
PM	0,808	0,749	0,825					
PROC	0,804	0,753	0,838	0,818				
SC	0,642	0,72	0,695	0,668	0,715			
HR	0,772	0,739	0,807	0,769	0,824	0,676		
STH	0,849	0,783	0,807	0,853	0,833	0,591	0,774	
SUS	0,812	0,793	0,805	0,81	0,834	0,543	0,796	0,791

Table 3, presents the results of the HTMT test which is smaller than 0.9 so it can be concluded that all constructs in this PLS model have met the Discriminant Validity requirements required based on the HTMT value. Thus, the PLS-SEM model has met Convergent and Discriminant validity.

Reliability Test

Construct reliability can be seen from the Crombachs Alpha value and the Composite Reliability value of each construct.

Table 4. Composite Reliability

Indicator	**Cronbach's Alpha**	**Composite Reliability**	**Average Variance Extracted (AVE)**
PD	0,957	0,965	0,797
PROC	0,933	0,952	0,832
PM	0,970	0,974	0,824
HR	0,960	0,968	0,833
STH	0,953	0,964	0,842
CON	0,951	0,961	0,804
BIS	0,966	0,971	0,808
SUS	0,946	0,959	0,823
SC	0,946	0,961	0,860

Based on the analysis results in Table 4, the composite reliability and Cronbachs alpha values of all constructs have exceeded 0.7, indicating that all constructs have met the required reliability.

ISSN: 2716-3865 (Print), 2721-1290 (Online)

Based on the overall value of the outer model test results, it is concluded that all indicators are valid in measuring their constructs and all constructs are reliable, so that testing can be continued at the inner model testing stage.

Structural Model Evaluation (Inner Model)

Partial Least Square Assumptions

The assumption or requirement that must be met in the inner model analysis is that there is no multicollinearity problem. To evaluate collinearity in the structural model (Inner Model). According to Sarstedt et al. (2016), to indicate that there is no multicollinearity, the Variance Inflating Factor (VIF) value must be less than 5.00.

Table 5. VIF Value of Goodness of Fit

Construct	VIF	Goodness of Fit Model		
		R Square	R Square Adjusted	Q Square
BIS	4.142			
KON	2.928			
PD	4.191			
PM	4.308			
PROC	4.128			
HR	3.491			
STH	4.594			
SUS	4.055			
SC		**0,648**	**0,638**	**0.548**

Table 5, shows that the VIF value of the inner model of all constructs is below 5.00, which means that there is no multicollinearity in the analyzed model.

Evaluation of Goodness of Fit Model

To ensure that the PLS model to be estimated to test the relationship between research variables is fit with the data being analyzed, R Square, Q Square and SRMR values of the model are tested. R Square will show the strength of the model in predicting the dependent variable, Q Square will show the level of predictive relevance of the model and SRMR shows the level of goodness of fit of the model. Table 5, shows that the R square value of 0.648 is categorized as quite strong (moderate). The Q square value of 0.548, shows that this study has a good observation value.

SRMR is the average value of standardized residuals which is a measure of model error. SRMR measures how well the tested model fits the data. The smaller the SRMR value, the better the fit of the model to the data. Table 6, shows the SRMR value of the estimated model of 0.032 is in the perfect fit category.

Table 6. SRMR

	Saturated Model	Estimated Model
SRMR	0,031	0,032

Based on the overall value of the goodness of fit model test results, it can be concluded that, the model fits a series of observations made so that the data can measure the relationship between variables very well, or the model made fits the research data.

Direct Effects

In PLS analysis, after the model is proven to be fit, testing the effect between variables can be carried out. In this study, only direct effects were tested because there were no intermediate

ISSN: 2716-3865 (Print), 2721-1290 (Online)

variables (mediators). To evaluate the direct effect, path coefficients between constructs are measured to see the significance and strength of the relationship.

Table 7. Direct Effect

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
BIS - SC	0.203	2.471	0.014
CON - SC	0.489	8.686	0.000
PD - SC	0.208	2.462	0.014
PM - SC	0.240	2.893	0.004
PROC - SC	0.358	3.681	0.000
HR - SC	0.179	2.231	0.026
STH - SC	0.360	2.955	0.003
SUS - SC	0.501	4.142	0.000

Based on the results of the inner model direct effects analysis in Table 7, it shows that the entire p value <0.05, this shows that all PD, PROC, PM, HR constructs. STH. CON. BIS, SUS have a positive direct effect on the success criteria of the SC project. The next test is to see the significance of the influence between variables by looking at the value of the significance value of the t-statistic. In this study tTabel for the number of respondent data 285 amounted to 1.65. The results showed that the t-statistic value was greater than the t value Tabel this indicates that the exogenous variables are stated to be significant on the endogenous variables.

Influence Ranking of Critical Success Factors (CSFs)

The results of the analysis described above, it has been found that the eight project success factors have a positive and significant effect on project success criteria. To develop a project success measurement model, a ranking of the influence of the success indicators on the project success criteria is then made, from which the top 15 rankings are taken.

Table 8. Ranking the Influence of Project Success Indicators

	Number (N)	□w	RII = w /A□.N	Ranking
PM4	285	966	0.678	1
PD7	285	959	0.673	2
PM8	285	958	0.672	3
BIS6	285	956	0.671	4
PD3	285	949	0.666	5
PD4	285	947	0.665	6
PD6	285	945	0.663	7(2)
PRC1	285	945	0.663	7(2)
SDM3	285	942	0.661	8
PM2	285	939	0.659	9
PRC3	285	937	0.658	10(3)
PRC4	285	937	0.658	10(3)
HR4	285	937	0.658	10(3)
PD1	285	936	0.657	11
BIS7	285	932	0.654	12
CON6	285	930	0.653	13
PM1	285	929	0.652	14(2)
PRC2	285	929	0.652	14(2)
BIS3	285	928	0.651	15(2)

ISSN: 2716-3865 (Print), 2721-1290 (Online)

BIS8	285	928	0.651	15(2)

Table 8, shows the top 15 ranking critical success indicators that have a significant effect on project success. These findings reflect the indicators that influence project management success and business success. It is interesting to note that the sustainability factor and the impact of the project on stakeholders received less attention from the respondents and were therefore considered less important for project success. However, environmental issues continue to occur and have become a serious problem for the sustainability of toll road development in Indonesia. A lot of research evidence that discusses the integration of sustainability into project management concepts including (Aarseth et al., 2017; Banihashemi et al., 2017a; Bayiley & Teklu, 2016; Hueskes et al., 2017; Lasrado et al., 2016; Martens & Carvalho, 2017a; Silvius & Schipper, 2016), this shows the importance of sustainability criteria in realizing project success. In addition, project impact on stakeholders is an important indicator of project success (Bayiley & Teklu, 2016). And it has a positive impact on business performance (Jugdev et al., 2020) which should be managed with a focus on achieving strategic and long-term goals (Zwikael et al., 2018). Therefore, in this study, researchers still include project impact and sustainability criteria as the basis for analysis in determining the weight of the success criteria for PPP-themed toll road development.

Weighting Criteria Project Success

The hierarchy model is formed starting from the main hierarchy is the goal of the success of PPP-themed toll road infrastructure projects. Furthermore, it is decomposed into four criteria as the second hierarchy, namely project success criteria including Project management success criteria (SC1), impact criteria to stakeholders (SC2), organizational strategic objectives criteria (SC3) and Sustainability Criteria (SC4). The third hierarchy, developed based on the magnitude of the influence of CSFs indicators on project success criteria plus researcher analysis. To determine the weight of criteria and sub-criteria, a stage 3 questionnaire was developed and 52 questionnaire answers were collected. The results of the data analysis of the comparison between the 4 main criteria for project success, resulted in an inconsistency value of 0.05, indicating consistent analysis results. The highest criteria weight is Project Management Success with a weight of 37.20%, followed by Sustainability criteria with a weight of 24.10%. The weight of the third criterion is the criterion of Project Impact on Stakeholders with a weight of 23.40% and the weight of the fourth criterion is Organizational Objectives and strategic business with a weight of 15.30%. Project success sub criteria are calculated based on data from respondents' responses to the influence of critical success factors on project success criteria which are formulated into sub criteria weights. Overall, the results of the analysis can be seen in Table 9.

Table 9. PPP Scheme Toll Road Project Success Assessment Format

Indicator	Weight	Assessment Percentage (%)	Assessment Weight	Assessment Method	
Project Management Success Criteria					
Meet the planned time target	0,098			1	Earned Value Management (EVM);
Meet quality and scope standards	0,092			2	Quality Performance Index (QPI)
Project cost realization as per Budget Plan	0,090			3	Earned Value Management (EVM);
Occupational health and safety under control	0,092			4	Safety Performance Index (SPI)
Total	0,372				

ISSN: 2716-3865 (Print), 2721-1290 (Online)

Impact to Stakeholders					
Stakeholder satisfaction with project outcomes	0,072			1	Infrastructure Service Satisfaction Index (IKLI); IKM (Permen PAN and RB No. 14 of 2017)
Project impacts on communities and the environment	0,073			2	Gross Domestic Product (GDP); Life Cycle Assessment (LCA).
Impact of land acquisition on the community	0,089			3	Infrastructure Service Satisfaction Index (IKLI); IKM (Permen PAN and RB No. 14 of 2017)
Total	0,234				
Strategic Organizational & Business Objectives					
Achievement of project objectives	0,031			1	Balance Scorecard
Appropriate regulatory and legal framework	0,030			2	Infrastructure Service Satisfaction Index (ISSI)
Good governance	0,030			3	Infrastructure Service Satisfaction Index (ISSI)
Availability of financial markets	0,032			4	Infrastructure Service Satisfaction Index (ISSI)
Macroeconomic stability	0,030			5	Gross Domestic Product (GDP)
Total	0,153				
Sustainability Criteria					
Integration of sustainability into construction project management practices	0,079			1	Sustainable Development Goals (SDGs)
Environmental resource saving policy	0,088			2	Benefit-Cost Analysis (BCA) Method
Consistent environmental performance monitoring at various levels	0,074			3	*Geographic Information System* (GIS); Sensor and IoT Technology; Satellite Image Mapping Analysis
Total	0,241				
Total	1,000				Category:

This study explores critical success factors into project success sub criteria under the four-dimensional framework of success criteria.

Project Success Criteria

Project Management Success Criteria

The first dimension is the "Project Management Success" criterion, representing the most fundamental dimension in this study. This dimension is a short-term measure associated with the traditional view of meeting time, cost and quality objectives (triple constraints) as well as occupational health and safety. These criteria can be directly assessed during implementation, and immediately after project completion. Much of the literature agrees with this statement and to date it still remains the dominant measure in determining the success of a project (Pollack et al., 2018; Williams et al., 2015). Effective management of triple constraints is critical to project success (Pollack et al., 2018), and has been the most widely accepted project success criterion since the 1970s and remains highly integrated in the project management literature (Charles et al., 2021; Pollack et al., 2018). To achieve the success of this criterion,

ISSN: 2716-3865 (Print), 2721-1290 (Online)

it is necessary to have consistent and effective project control and evaluation as well as feedback to monitor the progress of cost, time and quality, so as to minimize project risks. In addition, in the process of project implementation, it is important to control occupational health and safety that can reduce the risk of workplace injuries and fatalities, and minimize accident related costs (da Silva et al., 2019; Mohandes & Zhang, 2021; Ramos et al., 2020).

In meeting these criteria some very important indicators of project success should be taken into consideration by stakeholders including, Effective project plan development strategy, Project procurement, Competence and authority of the project manager. Effective communication and coordination.

Project plan development is essentially business planning that considers the organization's challenges and opportunities further ahead. By implementing an effective project plan development strategy, it can project resources to be managed more effectively.

Competitive procurement processes are considered a useful way to achieve value for money in PPPs (World Bank Institute 2012). This can be achieved if there is cost transparency and open information about the adequacy of funding in front of bidders. Transparency in efficient and effective procurement processes should lead to successful PPP projects (Simon et al., 2020).

PPP contractual arrangements are usually long-term, complex and involve collaboration between the public and private sectors for mutual benefit. In this situation, it is necessary to have some variations in contractual arrangements that can accommodate changes. Contract variations must be formulated and managed properly, so that they can provide various benefits including facilitating risk transfer, increasing value for money, increasing efficiency and easing the financial burden on the public sector.

The project manager is the key to the success of a project that can determine the achievement of project goals and align internal and external teams. Therefore, the Project Manager must be given authority in determining the strategy for starting the project, understanding the requirements, evaluating the project, analyzing and monitoring the progress of the project. Providing adequate authority to project managers is an important thing that ranks third for project success (Tavassolirizi et al., 2022a). A project manager must have technical and managerial skills such as the ability to integrate project boundaries, manage time, manage costs, manage resources, and deal with stakeholders.

Project Impact Criteria to Stakeholders

While project management success may indicate a well-managed and efficient project, it may not indicate long-term success or benefits to the organization. Therefore, the researcher explored the success criteria with the second dimension of "Impact to stakeholders". This dimension represents the needs and expectations of both internal and external stakeholders by assessing the extent to which project outcomes impact stakeholders.

Stakeholder satisfaction is the level of agreement that people and groups with an interest in the project's success have. Based on the results of several studies (Davis, 2014; Joslin & Müller, 2015; Lamprou & Vagiona, 2018; Pankratz & Basten, 2014), it was found that stakeholder satisfaction is critical to project success. The greater the stakeholder support, the greater the chance for project success, because stakeholder satisfaction can influence the decisions taken and can provide roles and responsibilities and strategic direction to achieve project success.

In addition, the organization must strive to create value for the community by meeting or exceeding community expectations, solving problems, meeting needs, and aligning with community social values. Therefore, it is necessary to measure the level of impact on society

ISSN: 2716-3865 (Print), 2721-1290 (Online)

and the environment to determine the extent to which the project results have a positive impact on society without environmental disturbance.

The construction of toll roads will cause a reduction in agricultural land and changes in surrounding land functions that have the potential to reduce the livelihoods of farmers. The results of previous research, land issues are very important indicators for project success (Tadewos & Patel, 2018; Tavassolirizi et al., 2022) which can result in delays in project development (Kandiyoh et al 2022). Resolving land issues requires solid cooperation with all stakeholders from both internal and external elements. Building a land acquisition planning team is necessary, with membership that not only has technical skills but also the art of understanding community interests, socializing and communicating well and influencing affected communities.

Strategic Organizational and Business Objective Criteria

Toll road construction, in addition to aiming for the welfare of the community and also to create business success for investors. To accommodate this, the researcher developed project success criteria with the third dimension, namely "Strategic Organizational and Business Objectives". This dimension is assessed based on, Achievement of project objectives, Appropriate regulatory and legal framework, Good governance, Availability of financial markets and Macroeconomic stability. Project objectives can provide a framework that can ensure that projects are well planned and executed. Clearly outlined project objectives can encourage project team members to evaluate their work consistently and realign if deviations occur. Several studies reveal that project definition and objectives rank top for project success (Banihashemi et al., 2017; Lamprou & Vagiona, 2018). In developing project objectives, it is necessary to involve all relevant stakeholders at various levels who can explain the benefits of toll road construction for the community and the environment.

The concept of PPP as a public policy has a direct relationship with the legal and regulatory conditions where the project is implemented. Therefore, to achieve the success of the project, a clear and comprehensive legal and regulatory framework is needed that can allow contracts to be defined with certainty and help contracting parties and other stakeholders understand the limits of their authority and the rules of the game. Building good governance is an important task for every country that contributes to transparency, accountability, public participation, efficiency and informed decision-making. This requires commitment from the government, political institutions, communities and others.

PPP financing schemes emphasize the importance of the availability of effective financial markets to provide financing for toll road projects. The government, which acts as a regulator, needs to establish a market-based co-financing scheme and improve access to credit in toll road infrastructure development. Financial markets as a means of business funding can provide benefits for the Government, among others, one source of state tax revenue, increase economic growth and create jobs for the community. While the benefits for investors have the potential to get high financial returns not only on the increase in capital value but also entitled to get dividends from the investment they have.

Macroeconomic stability is closely related to the financial affairs of the State. Because it can affect economic growth, price stability, opening new jobs. Some of the problems that often arise in the stability of the maro economy are problems in banking and bad credit, the crisis of the domestic exchange rate against external debt, unemployment, poverty and economic growth. Macroeconomic analysis needs to be carried out with the aim of striving for a balance in the balance of foreign payments such as sales and purchases of goods and services, grants from abroad, and financial transactions between residents at home and abroad. The balance of foreign payments must be in a balanced position to avoid a deficit. Therefore,

ISSN: 2716-3865 (Print), 2721-1290 (Online)

Macroeconomic analysis is important to be used to maintain the country's economic stability. So that economic actors abroad can trust and want to invest.

Sustainability Criteria

To look at long-term success, project success criteria were developed with a fourth dimension of "Sustainability". This dimension is measured by the integration of sustainability into project management practices, environmental resource saving policies and consistent environmental performance monitoring at various levels.

The definition of sustainable development has been widely accepted by the scientific community (Martens & Carvalho, 2017b). The concept of sustainability and the process of delivering sustainable projects are both very important as they can have high social, economic and environmental impacts. Many researchers have discussed the integration of sustainability into project management concepts (Aarseth et al., 2017; Banihashemi et al., 2017b; Hueskes et al., 2017; Ihuah et al., 2014; Martens & Carvalho, 2017b), demonstrating the importance of sustainability factors in realizing project success. Integrating sustainability into project management is a set of principles that govern the entire project life cycle by taking project management beyond traditional parameters by prioritizing environmental, social, and economic sustainability. By integrating sustainability in project management, it can result in sustainable projects that are efficient, well managed, and provide long term benefits.

Environmental resource-saving policies are a crucial step in protecting ecosystems from environmental damage that can occur due to toll road construction activities. An environmental resource-saving policy is key to the success of a sustainable project (Martens and Carvalho 2017). This policy should be communicated to all stakeholders and the public to include a commitment to continuous improvement, pollution prevention, and sustainability should be the framework for setting goals and objectives for toll road development. The utilization of natural resources always has implications for environmental quality and forest sustainability. Therefore, consistent monitoring of environmental performance is crucial to maintain the sustainability of nature and ensure a better future for future generations. Consistent monitoring of environmental performance at various levels can reduce potential impacts on the environment and improve compliance levels and reduce environmental liability risks.

Conclusion

This research was preceded by a systematic literature review covering scientific journals from various countries. In this research, 49 indicators and 4 criteria of project success have been found. These findings have been verified and validated by experts, practitioners and academics who have sufficient knowledge and experience about project success shown in Table 1. Furthermore, the 49 project success indicators were divided into 8 factors, using the PLS SEM method, resulting in the eight project success factors having a significant and positive effect on project success criteria. The results of evaluating the combined effect of the causal relationship of the 8 project success factors on the project success criteria resulted in an R Square value of 0.648 (model categorized as strong). This shows that if the project success factors are managed properly, there will be a great chance of achieving project success. In addition, this study produced 20 critical success indicators that affect project success shown in Table 8. These critical success indicators require special understanding and attention from stakeholders during the planning and implementation process of PPP-themed toll road projects. This study produces four main criteria that must be considered in assessing the success of PPP-themed toll road development. The success dimension is more emphasized on the success of Project management with a weight of 0.372, followed by development sustainability with a weight of 0.241, impact on stakeholders with a weight of 0.234 and Strategic Organizational and Business objectives with a weight of 0.153.

ISSN: 2716-3865 (Print), 2721-1290 (Online)

Implementation and Recommendations

This study provides a new way to assess the success of PPP-themed toll road projects, which is very important. The results of this study can inspire the government in making policies, legislation and regulations as well as innovative strategies in evaluating project success both in the short and long term. Successful toll road development planning should be an integrated part of the Government's strategic thinking and the dimensions of success should be determined as part of the Government's strategic objectives, and should be incorporated into decision-making prior to commencing PPP toll road development. Although this research contributes to science by providing a comprehensive framework for assessing project success and determining current and future PPP-themed toll road development strategies, further research is needed, especially with regard to operationalizing the assessment of project success criteria based on the criteria weights that have been found in this research.

References

Aarseth, W., Ahola, T., Aaltonen, K., Økland, A., & Andersen, B. (2017). Project sustainability strategies: A systematic literature review. *International Journal of Project Management*, *35*(6), 1071–1083. https://doi.org/10.1016/j.ijproman.2016.11.006

Ahmadabadi, A. A., & Heravi, G. (2019). The effect of critical success factors on project success in Public-Private Partnership projects: A case study of highway projects in Iran. *Transport policy*, *73*, 152-161. https://doi.org/10.1016/j.tranpol.2018.07.004

Alvarenga, J. C., Branco, R. R., Guedes, A. L. A., Soares, C. A. P., & da Silveira, W. (2019). The project manager core competencies to project success. *International Journal of Managing Projects in Business*, *13*(2), 277–292. https://doi.org/10.1108/IJMPB-12-2018-0274

Banihashemi, S., Hosseini, M. R., Golizadeh, H., & Sankaran, S. (2017a). Critical success factors (CSFs) for integration of sustainability into construction project management practices in developing countries. *International Journal of Project Management*, *35*(6), 1103–1119. https://doi.org/10.1016/j.ijproman.2017.01.014

Bayiley, Y. T., & Teklu, G. K. (2016). Success factors and criteria in the management of international development projects: Evidence from projects funded by the European Union in Ethiopia. *International Journal of Managing Projects in Business*, *9*(3), 562–582. https://doi.org/10.1108/IJMPB-06-2015-0046

Castro, M. S., Bahli, B., Farias Filho, J. R., & Barcaui, A. (2019). A contemporary vision of project success criteria. *Brazilian Journal of Operations & Production Management*, *16*(1), 66-77. https://doi.org/10.14488/BJOPM.2019.v16.n1.a6

Charles, S. H., Chang-Richards, A., & Yiu, T. W. (2021). What do post-disaster reconstruction project success indicators look like? End-user's perspectives. *International Journal of Disaster Resilience in the Built Environment*, *13*(1), 31–50.

Chou, J.-S., & Pramudawardhani, D. (2015). Cross-country comparisons of key drivers, critical success factors and risk allocation for public-private partnership projects. *International Journal of Project Management*, *33*(5), 1136–1150. https://doi.org/10.1016/j.ijproman.2014.12.003

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.

da Silva, S. L. C., & Amaral, F. G. (2019). Critical factors of success and barriers to the implementation of occupational health and safety management systems: A systematic

ISSN: 2716-3865 (Print), 2721-1290 (Online)

review of literature. *Safety science*, *117*, 123-132. https://doi.org/10.1016/j.ssci.2019.03.026

Davis, K. (2014). Different stakeholder groups and their perceptions of project success. *International Journal of Project Management*, *32*(2), 189–201. https://doi.org/10.1016/j.ijproman.2013.02.006

Davis, K. (2017). An empirical investigation into different stakeholder groups perception of project success. *International Journal of Project Management*, *35*(4), 604–617. https://doi.org/10.1016/j.ijproman.2017.02.004

Ghasemy, M., Teeroovengadum, V., Becker, J. M., & Ringle, C. M. (2020). This fast car can move faster: A review of PLS-SEM application in higher education research. *Higher education*, *80*(6), 1121-1152. https://doi.org/10.1007/s10734-020-00534-1

Gunawan, M. M., & Roy, A. F. V. (2023). A FRAMEWORK FOR SUCCESSFUL PROVISION OF SUSTAINABLE INFRASTRUCTURE WITH A PPP SCHEME IN INDONESIA. *Jurnal Pensil: Pendidikan Teknik Sipil*, *12*(1), 33–47.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., Ray, S., Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). An introduction to structural equation modeling. *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*, 1–29. https://doi.org/10.1007/978-3-030-80519-7_1

Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, *1*(3), 100027. https://doi.org/10.1016/j.rmal.2022.100027

Hansen, S., Too, E., & Le, T. (2021). Structure of Infrastructure Project Selection Criteria in Indonesia: A Systematic Approach. *Civil Engineering and Architecture*, *9*(6), 1776–1784. https://doi.org/10.13189/cea.2021.090611

Hueskes, M., Verhoest, K., & Block, T. (2017). Governing public–private partnerships for sustainability: An analysis of procurement and governance practices of PPP infrastructure projects. *International Journal of Project Management*, *35*(6), 1184–1195. https://doi.org/10.1016/j.ijproman.2017.02.020

Ihuah, P. W., Kakulu, I. I., & Eaton, D. (2014). A review of Critical Project Management Success Factors (CPMSF) for sustainable social housing in Nigeria. *International Journal of Sustainable Built Environment*, *3*(1), 62–71. https://doi.org/10.1016/j.ijsbe.2014.08.001

Ika, L. A., & Donnelly, J. (2017). Success conditions for international development capacity building projects. *International Journal of Project Management*, *35*(1), 44–63. https://doi.org/10.1016/j.ijproman.2016.10.005

Imam, H., & Zaheer, M. K. (2021). Shared leadership and project success: The roles of knowledge sharing, cohesion and trust in the team. *International journal of project management*, *39*(5), 463-473. https://doi.org/10.1016/j.ijproman.2021.02.006

Jarrah, M. A., Baker, J., & Altarawneh, I. (2022). Toward successful project implementation: Integration between project management processes and project risk management. *Problems and Perspectives in Management*, *20*(3), 258. https://doi.org/10.21511/ppm.20(3).2022.21

Joslin, R., & Müller, R. (2015). Relationships between a project management methodology and project success in different project governance contexts. *International Journal of Project Management*, *33*(6), 1377–1392. https://doi.org/10.1016/j.ijproman.2015.03.005

ISSN: 2716-3865 (Print), 2721-1290 (Online)

Jugdev, K., Mathur, G., & Fung, T. (2020). Mediated effect of project management asset characteristics on firm performance. *International Journal of Managing Projects in Business*, *13*(7), 1442–1464. https://doi.org/10.1108/IJMPB-12-2018-0284

Kavishe, N., Jefferson, I., & Chileshe, N. (2019). Evaluating issues and outcomes associated with public–private partnership housing project delivery: Tanzanian practitioners' preliminary observations. *International Journal of Construction Management*, *19*(4), 354–369. https://doi.org/10.1080/15623599.2018.1435154

Khalifeh, A., Farrell, P., & Al-edenat, M. (2020). The impact of project sustainability management (PSM) on project success: A systematic literature review. *Journal of Management Development*, *39*(4), 453-474. https://doi.org/10.1108/JMD-02-2019-0045

Khoo-Lattimore, C., Mura, P., & Yung, R. (2019). The time has come: A systematic literature review of mixed methods research in tourism. *Current Issues in Tourism*, *22*(13), 1531-1550. https://doi.org/10.1080/13683500.2017.1406900

Lamprou, A., & Vagiona, D. (2018). Success criteria and critical success factors in project success: a literature review. *RELAND: International Journal of Real Estate & Land Planning*, *1*, 276–284. https://doi.org/10.26262/reland.v1i0.6483

Lasrado, F., Arif, M., Rizvi, A., & Urdzik, C. (2016). Critical success factors for employee suggestion schemes: a literature review. *International Journal of Organizational Analysis*, *24*(2), 315–339. https://doi.org/10.1108/IJOA-04-2014-0753

Liu, T., Wang, Y., & Wilkinson, S. (2016). Identifying critical factors affecting the effectiveness and efficiency of tendering processes in Public–Private Partnerships (PPPs): A comparative analysis of Australia and China. *International Journal of Project Management*, *34*(4), 701–716. https://doi.org/10.1016/j.ijproman.2016.01.004

Martens, M. L., & Carvalho, M. M. (2017a). Key factors of sustainability in project management context: A survey exploring the project managers' perspective. *International Journal of Project Management*, *35*(6), 1084–1102. https://doi.org/10.1016/j.ijproman.2016.04.004

Meng, X., & Boyd, P. (2017). The role of the project manager in relationship management. *International Journal of Project Management*, *35*(5), 717–728. https://doi.org/10.1016/j.ijproman.2017.03.001

Mohandes, S. R., & Zhang, X. (2021). Developing a Holistic Occupational Health and Safety risk assessment model: An application to a case of sustainable construction project. *Journal of Cleaner Production*, *291*, 125934. https://doi.org/10.1016/j.jclepro.2021.125934

Osei-Kyei, R., & Chan, A. P. C. (2017). Implementing public–private partnership (PPP) policy for public construction projects in Ghana: critical success factors and policy implications. *International Journal of Construction Management*, *17*(2), 113–123. https://doi.org/10.1080/15623599.2016.1207865

Pankratz, O., & Basten, D. (2014). Ladder to success–eliciting project managers' perceptions of IS project success criteria. *International Journal of Information Systems and Project Management*, *2*(2), 5–24.

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. https://doi.org/10.1108/IJMPB-09-2017-0107

Ramos, D., Afonso, P., & Rodrigues, M. A. (2020). Integrated management systems as a key facilitator of occupational health and safety risk management: A case study in a medium

ISSN: 2716-3865 (Print), 2721-1290 (Online)

sized waste management firm. *Journal of Cleaner Production*, *262*, 121346. https://doi.org/10.1016/j.jclepro.2020.121346

Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: Where the bias lies! *Journal of Business Research*, *69*(10), 3998–4010. https://doi.org/10.1016/j.jbusres.2016.06.007

Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J. H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict. *European journal of marketing*, *53*(11), 2322-2347. https://doi.org/10.1108/EJM-02-2019-0189

Silvius, G., & Schipper, R. (2016). Exploring the relationship between sustainability and project success-conceptual model and expected relationships. *International Journal of Information Systems and Project Management*, *4*(3), 5–22.

Simon, L., Jefferies, M., Davis, P., & Newaz, M. T. (2020). Developing a theoretical success factor framework for the tendering phase of social infrastructure PPPs. *International Journal of Construction Management*, *20*(6), 613–627. https://doi.org/10.1080/15623599.2020.1720343

Stanitsas, M., Kirytopoulos, K., & Leopoulos, V. (2021). Integrating sustainability indicators into project management: The case of construction industry. *Journal of Cleaner Production*, *279*, 123774. https://doi.org/10.1016/j.jclepro.2020.123774

Tadewos, S. G., & Patel, D. (2018). Factors influencing time and cost overruns in road construction projects: Addis Ababa, Ethiopian scenario. *Int. Res. J. Eng. Technol*, *5*, 177–180.

Tavassolirizi, M., Sarvari, H., Chan, D. W. M., & Olawumi, T. O. (2022a). Factors affecting delays in rail transportation projects using Analytic Network Process: the case of Iran. *International Journal of Construction Management*, *22*(14), 2712–2723. https://doi.org/10.1080/15623599.2020.1819946

Turner, J. R., & Xue, Y. (2018). On the success of megaprojects. *International Journal of Managing Projects in Business*, *11*(3), 783–805. https://doi.org/10.1108/IJMPB-06-2017-0062

Volden, G. H., & Welde, M. (2022). Public project success? Measuring the nuances of success through ex post evaluation. *International Journal of Project Management*, *40*(6), 703–714. https://doi.org/10.1016/j.ijproman.2022.06.006

Williams, P., Ashill, N. J., Naumann, E., & Jackson, E. (2015). Relationship quality and satisfaction: Customer-perceived success factors for on-time projects. *International Journal of Project Management*, *33*(8), 1836–1850. https://doi.org/10.1016/j.ijproman.2015.07.009

Zwikael, O., Chih, Y.-Y., & Meredith, J. R. (2018). Project benefit management: Setting effective target benefits. *International Journal of Project Management*, *36*(4), 650–658. https://doi.org/10.1016/j.ijproman.2018.01.002

ISSN: 2716-3865 (Print), 2721-1290 (Online)