

## ANALYSIS OF PROJECT COMMUNICATION FACTORS ON THE LEVEL OF PROJECT SUCCESS IN TEBO DISTRICT

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DOI: <http://dx.doi.org/10.31869/rtj.v8i1.5731>

**Abstract:** This research aims to identify communication factors that influence the success of construction projects in Tebo Regency, as well as determine the dominant factors that influence the success of these projects. The research method used was a field survey with data collection through questionnaires to parties involved in construction projects in Tebo Regency. The data obtained was analyzed using regression analysis to assess the influence of communication factors on project success. The research results show that the Communication Skills and Competency (KKK) factors have a positive and significant influence on project success, while the Information and Communication Technology (ICT), Communication Management Plan (RMK), and Teamwork (KJT) factors have a greater influence. low and insignificant. The implication of this research is that parties involved in construction projects in Tebo Regency need to pay attention to and improve communication skills, both verbal and written, as well as effective use of information and communication technology. This can improve project implementation and achieve better results.

**Keywords:** *Construction Projects, Communication Factors, Project Success, Skills*

### A. Introduction

A construction project is a series of activities that are interrelated with efforts to construct a building, including basic work in the fields of civil engineering and architecture which are limited by time and resources. In a construction project, there are parties who have their respective roles and responsibilities, including the project owner, consultant and contractor. Coordination and cooperation between each party is needed in a solid and structured manner, and this is the main key for the project to be successful. Construction can be completed according to the planned schedule. However, sometimes it is often found that construction management does not work well and this affects the success of a project. One of the most frequent problems is poor communication between the parties involved in the project. The more parties involved in a construction project, the more important the influence of communication will be. (Damanik, 2021)

Construction is an activity related to efforts to build infrastructure. In its implementation, construction can be influenced by many variables and unexpected factors (Hapsari et al., 2019). In general, the parties involved in construction are the owner, contractor and consultant, so effective communication is needed to support project success.

Senaratne and Ruwanpura (2016) explain that effective communication is a link between stakeholders with different cultures, backgrounds, expertise, points of view and interests. Communication in a project is the key to success in work management (William and Tirtoatmodjo, 2020). Poor communication can cause a project success rate of only 52%, whereas with good communication the project success rate can reach 80% (PMI, 2017).

Communication management is an important part of project management defining the necessary planning, recording and distribution processes and obtaining information from project participants (PMI 2013).

From various research conducted, it was found that the communication delivery aspect is the main factor that influences communication between consultants and contractors on project success (Saputra, 2017). Research conducted by (Damanik, 2021) in Surabaya revealed that communication has a positive and significant influence on the success of project work between contractor companies and subcontractors. Meanwhile, important indicators of effective communication are frequency of

communication, two-way communication, clarity of message content, honesty in communication, and conflict resolution. Research conducted by (Nokulunga S.M. Khanyile<sup>1\*</sup>, 2019) in Swaziland found that there was a relationship between project outcomes and three practices, namely; information technology, communications management plans, and clear channels within the organizational structure. These findings present key empirical evidence of communication management practices as they relate to project outcomes.

In the literature (Randy Putra Agritama, 2018) it is found that the communication factor in projects is a factor that influences the occurrence of project delays, subsequent literature (Deden Matri Wirabakti, 2014) also finds that the communication factor also influences project delays. In the literature (Musrifah Mardiani Sanaky, 2021), communication between personnel in a project is also a cause of project delays. In the implementation of construction projects, if the information distribution process is not correct it will result in different understandings for each recipient, so that the way it is implemented will also be different. In a project, this will result in quality not being achieved, implementation schedules being late, costs escalating, and even impacting job satisfaction.

In research conducted by Anelpran Dervin Damanik, Melly Lukman and Josefine Ernestine Latupeirissa 2021, with the title Analysis of Communication Factors on the Success Level of Construction Project Implementation in Raja Ampat Regency, stated that in a construction project there are parties who have their respective roles and responsibilities. including, project owners, consultants and contractors. Coordination and cooperation between each party is needed in a solid and structured manner. Errors or poor communication patterns in a project can have an impact on poor performance. Communication factors have a very high relationship to project success.

In research conducted by Richard Marenoa, Cut Zukhrina Oktaviani and Saiful Husin 2022, entitled Correlation Analysis of Project Communication Factors on Time Performance Achievement in Banda Aceh City, it is explained that project communication factors partially have a very high relationship to time performance achievement. ., performance reports, use of facilities and technology, delivery of information, communication skills and coordination relationships simultaneously have a level of close relationship to the achievement of time performance in the City of Banda Aceh.

In research conducted by Heflima S. Harsian, Wahyudi P. Utama and, Dwifitria Y. Jumas 2021, with the title Factors Barriers to Effective Communication in Government Construction Projects from the Perspective of Service Providers in the West Sumatra Provincial Government Area, it was found that communication barriers on construction projects can come from several factors such as internal, external and technical factors, information factors and project documents, and socio-cultural factors. Various conflicts in construction projects arise due to a lack of effective communication between the parties involved in the project. Knowledge factors and project documents are the obstacles with the highest influence in the effective communication process in construction projects. So it is hoped that this can be taken into consideration by the project provider, in this case the West Sumatra Provincial Government, so that it can make improvements and can make knowledge and project documentation factors important in improving communication in construction projects in its environment.

One of the reasons this research was carried out was because very few studies related to communication in construction projects in newly developing areas were carried out by researchers, so not much literature was found regarding this matter. From research conducted by Heflima S. Harsian, Wahyudi P. Utama and, Dwifitria Y. Jumas 2020, using quantitative methods, surveys and literature studies above, the author tries to carry out research using this method in newly established areas such as Tebo Regency, For this reason, researchers want to see to what extent the communication factor in construction projects, especially in newly formed administrative areas such as Tebo Regency, which is only 22 years old, was formed in 1999, is relatively new, is a newly developing area and is an area that has a high level of development is quite rapid from year to year.

**B. Methods**

The approach used in this research is a quantitative approach, the reason for using this approach is that quantitative is used to determine the dominant communication factors project outcome using a research instrument in the form of a questionnaire involving external parties involved in the research discussion topic. The research process is the stages carried out during research starting from the background, objectives to be achieved, data collection and analysis stages. After the research process is carried out, continue with drawing conclusions and research suggestions. For more details, this research process is depicted in the research process flow chart as follows:

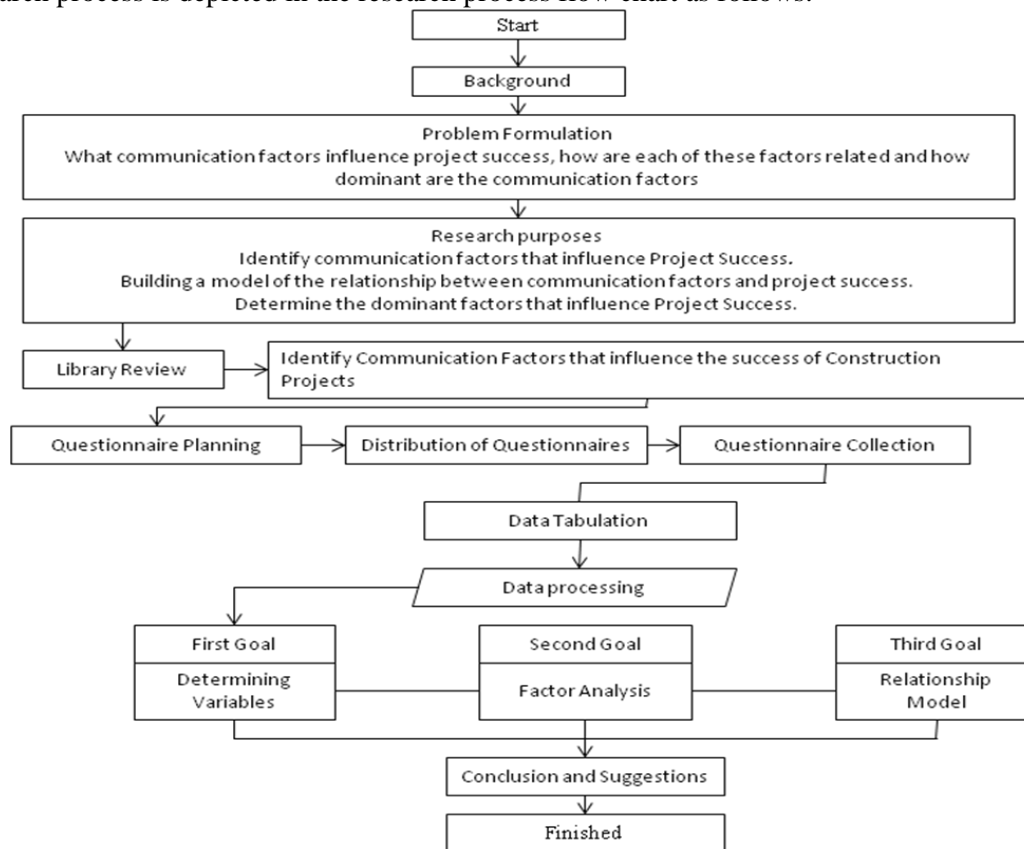


Figure 1. Research Stages

**C. Results and Discussion**

*Descriptive Analysis*

*Descriptive analysis was obtained using the formula (average/5) x 100 with a value of >86 Very Good, 80-85 Good, 65-79 Fairly Good, 45-64 Poor, and <45 Very Poor, (Arikunto, 2019).*

Table 1. Statistical Description Data for Factors and Variables

Factor	Variable	Rate-Rata	Rata <sup>2</sup> (Likert scale)	Category
Information and communication technology	TIK1	4,28	85,52	Good
	TIK2	4,65	92,95	Very Good
	TIK3	4,48	89,52	Very Good
	TIK4	4,42	88,38	Very Good
	TIK5	3,94	78,86	Very Good
Communication Skills and	KKK1	4,41	88,19	Very Good
	KKK2	4,35	87,05	Very Good

Competencies (KKK)	KKK3	4,42	88,38	Very Good
	KKK4	4,32	86,48	Very Good
	KKK5	4,34	86,86	Very Good
Communication Management Plan (RMK)	RMK1	4,30	85,90	Good
	RMK2	4,36	87,24	Very Good
	RMK3	4,35	87,05	Very Good
	RMK4	4,47	89,33	Very Good
Teamwork (KJT)	KJT1	4,42	88,38	Very Good
	KJT2	4,42	88,38	Very Good
	KJT3	4,29	85,71	Good
	KJT4	4,35	87,05	Very Good
	KJT5	3,91	78,29	Very Good
	KJT6	4,27	85,33	Good
	KJT7	2,66	53,14	Less Good

### Research Results Objective 1

#### *Confirmatori Factor Analysis (CFA)*

##### a) Kaiser Mayer Olkin Test

From the results of data processing, the KMO and Bartlett's values are obtained as in Table 2.

#### Anti Image Matrices

Anti Image Matrices aims to determine variables that are suitable for use in factor analysis by using the Measure of Sampling Adequacy (MSA) value with the MSA value indicator having to be greater than 0.5. From data processing, the MSA value is obtained as in Table 2.

Table 2. CFA factor Information and Communication Technology (ICT) Running 1

Factor	Variable	Loading Factor	MSA	KMO/Barllet	Eugenevalue (variance)	Cronbach alpha
Information and communication technology	TIK1	0,653	0,537	0,550	2,234 (44,670)	0,644
	TIK2	0,660	0,486			
	TIK3	0,667	0,529			
	TIK4	0,667	0,716			
	TIK5	0,695	0,546			

Table 2 above is the result of the Factor Analysis test which states that it is valid because the factor loading value is  $\geq 0.5$ . For the Anti Image Matrices test, there is one variable that is  $< 0.5$ , then this variable must be discarded and not included in the next process. Meanwhile, the variable that must be removed from the ICT Factor is the ICT2 variable.

Table 3 CFA Information and Communication Technology (ICT) Factors Running 2

Factor	Variable	Loading Factor	MSA	KMO/Barllet	Eugenevalue (variance)	Cronbach alpha
Information and communication technology	TIK1	0,644	0,698	0,675	1,955 (48,876)	0,644
	TIK3	0,558	0,762			
	TIK4	0,748	0,681			
	TIK5	0,819	0,632			

From Table 3 above, the results of the Running 2 Factor Analysis test state that it is valid because the factor loading value is  $\geq 0.5$ . For the Anti Image Matrices test, the value is  $< 0.5$ , so the valid ICT variables are ICT1, ICT3, ICT4, and ICT5.

Table 4. CFA Communication Skills and Competency Factors (KKK) Running 1

Factor	Variable	Loading Factor	MSA	KMO/Barllet	Eugenevalue (variance)	Cronbach alpha
Communication Skills and Competencies (KKK)	KKK1	0,778	0,681	0,722	2,740 (54,809)	0,785
	KKK2	0,825	0,695			
	KKK3	0,800	0,764			
	KKK4	0,719	0,724			
	KKK5	0,546	0,811			

From Table 4 above, the results of the Running 1 Factor Analysis test state that it is valid because the factor loading value is  $\geq 0.5$ . For the Anti Image Matrices test, the value is  $< 0.5$ , so the valid KKK variables are KKK1, KKK2, KKK3, KKK4, AND KKK5.

Table 5 CFA Communication Management Plan Factors (RMK) Running 1

Factor	Variable	Loading Factor	MSA	KMO/Barllet	Eugenevalue (variance)	Cronbach alpha
Communication Management Plan (RMK)	RMK1	0,808	0,672	0,682	2,591 (64,786)	0,818
	RMK2	0,789	0,728			
	RMK3	0,856	0,672			
	RMK4	0,763	0,660			

From Table 5 above, the results of the Running 1 Factor Analysis test state that it is valid because the factor loading value is  $\geq 0.5$ . For the Anti Image Matrices test, the value is  $< 0.5$ , so the valid RMK variables are RMK1, RMK2, RMK3, and RMK4.

Table 6. CFA Teamwork Factor (KJT) Running 1

Factor	Variable	Loading Factor	MSA	KMO/Barllet	Eugenevalue (variance)	Cronbach alpha
Teamwork (KJT)	KJT1	0,757	0,765	0,743	3,074 (43,915)	
	KJT2	0,830	0,728			
	KJT3	0,747	0,836			
	KJT4	0,804	0,810			
	KJT5	0,290	0,511			
	KJT6	0,712	0,847			
	KJT7	0,125	0,457			

From Table 6 above, the results of the Factor Analysis test state that there are five variables that are valid because the factor loading value is  $\geq 0.5$ , and there are two variables that are invalid because the factor loading value is  $< 0.5$ . For the Anti Image Matrices test, there are five variables that are valid because they are  $\geq 0.5$  and two that are not valid because they are  $< 0.5$ , so these variables must be discarded and not included in the next process. The variables that must be removed from the KJT Factor are the KJT5 and KJT7 variables.

Table 7. CFA Teamwork Factor (KJT) Running 2

Factor	Variable	Loading Factor	MSA	KMO/Barllet	Eugenevalue (variance)	Cronbach alpha
Teamwork (KJT)	KJT1	0,777	0,751	0,795	2,996 (59,911)	0,829
	KJT2	0,851	0,751			
	KJT3	0,736	0,851			
	KJT4	0,793	0,798			
	KJT6	0,704	0,876			

From Table 7 above, the Running 2 Factor Analysis test results state that they are valid because the factor loading value is  $\geq 0.5$ . and for the Anti Image Matrices test the value is  $<0.5$ , then the valid KJT variables are KJT1, KJT2, KJT3, KJT4, and KJT6

From the test results it was concluded that the variable Analysis of Project Communication Factors on Project Success Levels in Tebo Regency had a KMO value of  $> 0.5$  and a Bartlett's value of  $< 0.05$ , so it was concluded that there was a feasibility variable that could be processed further using factor analysis because it met the requirements. Based on the table above, there are 3 (three) variables that have an MSA value less than 0.5, namely the variables ICT2, KJT5 and KJT7 which are categorized as variables that are not suitable for use, so referring to the concept of Factor Analysis, data reprocessing is carried out or known as Running does not involve variables that do not meet the MSA requirements.

Table 8. CFA of Communication Factors in Construction Projects (Recapitulation)

Factor	Variable	Loading Factor	MSA	KMO/Bartlett	Eigenvalue (variance)	Cronbach alpha
Information and Communication Technology	TIK1	0,644	0,698	0,675	1,955 (48,876)	0,644
	TIK3	0,558	0,762			
	TIK4	0,748	0,681			
	TIK5	0,819	0,632			
Communication Skills and Competencies (KKK)	KKK1	0,778	0,681	0,722	2,740 (54,809)	0,785
	KKK2	0,825	0,695			
	KKK3	0,800	0,764			
	KKK4	0,719	0,724			
Communication Management Plan (RMK)	RMK1	0,808	0,672	0,682	2,591 (64,786)	0,818
	RMK2	0,789	0,728			
	RMK3	0,856	0,672			
	RMK4	0,763	0,660			
Teamwork (KJT)	KJT1	0,777	0,751	0,795	2,996 (59,911)	0,829
	KJT2	0,851	0,751			
	KJT3	0,736	0,851			
	KJT4	0,793	0,798			
	KJT6	0,704	0,876			

From the results of the second running, 18 variables were obtained that met the MSA value requirements, so that the next stage of analysis was to use variables that met the MSA value requirements.

## Research Results Objective 2

### *Analisis Structural Equation Modeling (SEM)*

The data that has been collected is then processed using SmartPLS 4.0 software. The results of data processing can be seen through the following description:

### Measurement Model Assessment (MMA)

The tests carried out on the measurement model assessment:

#### **Construct Validity**

##### **a) Convergent validity**

The convergent validity test is used to describe the correlation between constructs and indicators. The greater the correlation value, the better the relationship between the construct and the indicator. Correlation is declared valid with a factor loading value  $\geq 0.7$ .

Table 9. Outer Loadings-Matrix Test Results

	KJT	KKK	RMK	TIK	po
KJT1	0.763				
KJT2	0.844				
KJT3	0.731				
KJT4	0.812				
KJT6	0.710				
KKK1		0.719			
KKK2		0.786			
KKK3		0.832			
KKK4		0.768			
KKK5		<b>0.551</b>			
RMK1			0.773		
RMK2			0.711		
RMK3			0.891		
RMK4			0.815		
TIK1				0.756	
TIK4				0.708	
TIK5				0.834	
po1					0.774
po2					0.878
po5					0.762

In table 9 above, from the Outer Loadings test results, there is one variable that is  $<0.7$ , so this variable must be discarded and not included in the next process. The variable that must be removed from the KKK Factor is the KKK5 variable.

#### b) Discriminant Validity

The results of the Discriminant Validity Test can be seen in Table 10.

Table 10. Cross Loading Test Results

	KJT	KKK	RMK	TIK	po
KJT1	0.763				
KJT2	0.844				
KJT3	0.731				
KJT4	0.812				
KJT6	0.710				
KKK1		0.719			
KKK2		0.786			
KKK3		0.832			
KKK4		0.768			
KKK5		<b>0.551</b>			
RMK1			0.773		
RMK2			0.711		
RMK3			0.891		
RMK4			0.815		
TIK1				0.756	

TIK4				0.708	
TIK5				0.834	
po1					0.774
po2					0.878
po5					0.762

In table 10 above, from the Cross Loading test results, there is one variable that is  $<0.7$ , so this variable must be discarded and not included in the next process. The variable that must be removed from the KKK Factor is the KKK5 variable.

Table 11. Fornel Lorcker criterion test results

	KJT	KKK	RMK	TIK	po
KJT	0,774				
KKK	0,712	0,791			
RMK	0,704	0,624	0,800		
TIK	0,573	0,481	0,514	0,768	
po	0,611	0,651	0,513	0,352	0,807

From Table 12, the Forrel Lorcker Criterion test value is obtained with a value of  $\geq 0.7$

Table 13. Discriminant Validity test results - Matrix

	KJT	KKK	RMK	TIK	Po
KJT					
KKK	0,881				
RMK	0,818	0,746			
TIK	0,784	0,666	0,730		
po	0,750	0,794	0,621	0,492	

From Table 13 above, for the Discriminant Validity test, the dominant factor is obtained, namely the KKK Factor with a value of 0.881.

### Avarage Variance Extracted (AVE)

Another way to measure reliability is with AVE, where if the root AVE value of a construct is greater than the correlation value of the construct with other constructs in the model then it can be concluded that the construct has good discriminant validity values and vice versa. It is recommended that the AVE measurement value should be greater than 0.5. From the results of the measurement model described above to test construct validity and instrument reliability, the results of the outer model test can be seen in Table 14.

Table 14 Analysis Model Measurement Test Results (Convergent Validity)

Factor	Variable	Loading Factor	Composite reability	Cronbach alpha	Anerage Variance Extracted
Information and Communication Technology	TIK1	0,755	0,840	0,831	0,598
	TIK4	0,708			
	TIK5	0,834			
Communication Skills and Competencies (KKK)	KKK1	0,723	0,823	0,804	0,626
	KKK2	0,810			
	KKK3	0,855			
	KKK4	0,772			
	RMK1	0,773	0,851	0,818	0,640



Communication Management Plan (RMK)	RMK2	0,712	0,665	0,652	0,589
	RMK3	0,891			
	RMK4	0,815			
Teamwork (KJT)	KJT1	0,763	0,776	0,736	0,651
	KJT2	0,844			
	KJT3	0,731			
	KJT4	0,812			
	KJT6	0,710			
Project Outcome	PO1	0,778	0,776	0,736	0,651
	PO2	0,875			
	PO5	0,763			

The following is the final model after the convergent validity test was carried out, the Path Analysis model was obtained, which can be seen in Figure 2.

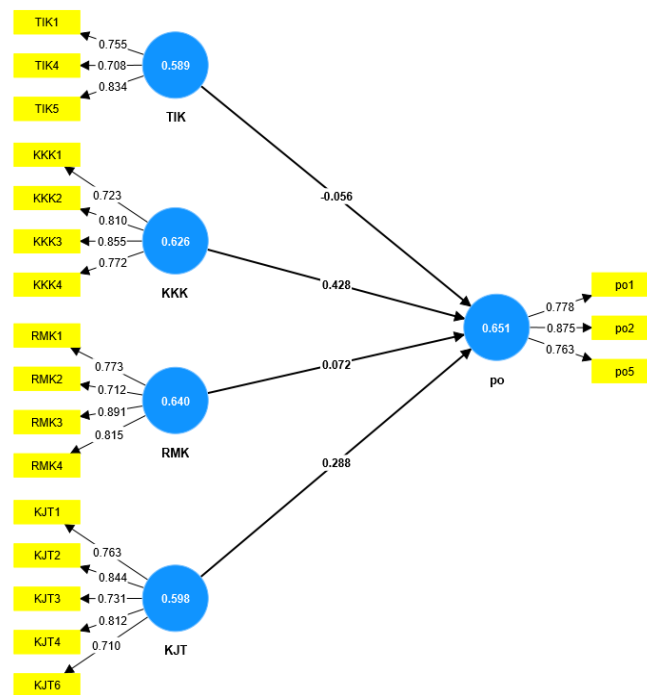


Figure 2. MMA Model Path Analysis After Convergent and Discriminant Validity Tests

**Structural Model Assessment (SMA)**

**R Square dan Q Square**

**R Square** used to measure how much an endogenous variable is influenced by other variables.

Table 15. R Square Criteria

R square Value	Information
>0,75	Strong
0,50–0,75	Currently
0,25–0,49	Weak

Sumber : Hair dkk (2014)

**Q Square (Predictive Relevance)**

Used to predict how well the observed values are produced by the model and also to estimate its parameters. A Q square value greater than 0 (zero) shows that the model has predictive relevance, while a Q square value less than 0 (zero) shows that the model has less predictive relevance. However, if the calculation results show a Q square value of more than 0 (zero), then the model can be said to have relevant predictive value. Hair et al (2014) classify the strength of exogenous variables in predicting endogenous variables as shown in the following table:

Tabel 16. Q Square Criteria

Q Square Value	Information
>0,35	Strong
0,15-0,34	Currently
0,02-0,14	Weak

Sumber : Hair dkk (2014)

*Inner Model Test*

The structural model test was carried out by including all indicators that were declared to have passed the validity and reliability tests. Evaluation of the structural model is carried out using a bootstrapping process which will produce a coefficient of determination ( $R^2$ ) and Predictive relevance ( $Q^2$ ). The results of data processing for structural model testing are explained as follows:

**Coefficient of Determination ( $R^2$ )**

Results of the coefficient of determination  $R^2$  from the model can be seen in Table 17.

Table 17. Results of the Determination Coefficient Test  $R^2$ 

	R-square	R-square adjusted
p	0,472	0,451

Coefficient of determination  $R^2$  for Project Success in Table 17 above, it is 0.472, indicating that Project Outcome/Project Success has an influence in the weak category.

**Predictive Relevance ( $Q^2$ )**

Predictive Relevance ( $Q^2$ ) measures how well the observed values are generated by the model and also its parameter estimates. A model is considered to have predictive relevance value if  $Q^2 > 0$ . Quantity  $Q^2$  has a value with a range of 0;  $Q^2 > 0.75$ , 0.50, and 0.25 are interpreted as strong, moderate, and weak. After evaluating the outer model and issuing several statements regarding invalid indicators and testing their reliability, and continuing to evaluate the inner model, the image of the final research model that will be included in hypothesis testing can be seen in Figure 3.

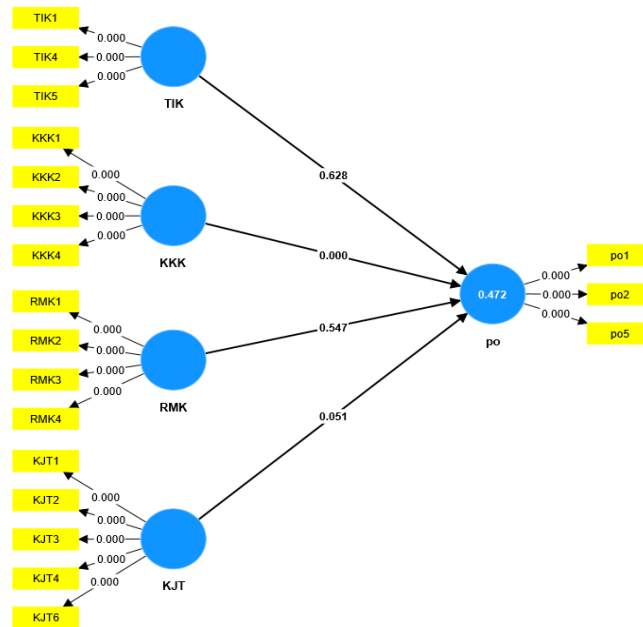


Figure 3. SMA Model Path Analysis After Inner Model Testing

**Direct Effect Test**

The results of the direct influence test for each variable can be seen in Table 18.

Table 18. Direct Effect of Latent Variables

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
KJT -> po	0.256	0.272	0.152	1.687	0.092
KKK -> po	0.453	0.457	0.114	3.974	<b>0.000</b>
RMK -> po	0.061	0.054	0.119	0.515	0.606
TIK -> po	-0.048	-0.037	0.113	0.423	0.672

**The Influence of Team Collaboration (KJT) on Project Outcomes (PO)**

The research results show that KJT has a coefficient value of 0.256,  $t_{value_{stat}}$  of  $0.256 < 1.96$  and  $p_{value}$   $0.092 > 0.05$  (significant). That Teamwork (KJT) does not have a positive and significant effect on Project Outcome (PO). The Teamwork Factor (KJT) shows less positive and significant influence on the Project Outcome (PO). This is different from research conducted (Davis, et al., 2021) which states that in Construction Projects, the project team is multi-disciplinary, both in terms of knowledge and organization.

**The Influence of Communication Skills and Competencies (KKK) on Project Outcomes (PO)**

The research results show that KKK has a coefficient value of 0.428,  $t_{value_{stat}}$  of  $0.453 < 1.96$  and  $p_{value}$   $0.000 < 0.05$  (significant). That Communication Skills and Competencies (KKK) have a positive and significant influence on Project Outcomes (PO). Communication Skills and Competency (KKK) factors which show a positive and significant influence on Project Outcomes (PO) in Tebo Regency, this research is in accordance with research conducted by Bakhtiyar, et al (2012) and Ceric (2014) in Harsian (2021) which states that coordination and communication are one of the factors that result in delays in construction projects, this is in accordance with the results of research analysis conducted on construction activities in the Public Works and Public Housing Department of Tebo Regency, the communication factor which greatly influences the success of construction projects in Tebo regency is

the factor Communication Skills and Competencies (KKK) which consist of excellent verbal communication between project stakeholders, excellent written communication between project stakeholders, effective use of information technology and communication between project stakeholders, and appropriate interpretations relating to contractual communications between project stakeholders.

### **The Influence of the Communication Management Plan (RMK) on Project Outcome (PO)**

The research results show that RMK has a coefficient value of 0.072,  $t_{\text{value}_{\text{stat}}}$  of  $0.061 < 1.96$  and  $p_{\text{value}} 0.606 > 0.05$  (significant). That the Communication Management Plan (RMK) does not have a positive and significant influence on the Project Outcome (PO). Communication Management Plan (RMK) factors do not have a positive and significant effect on Project Outcomes (PO), this is in accordance with research conducted by Khanyle et al, (2019) which states that Communication Management Plans are not very popular in Construction Project management in general in Indonesia.

### **The Influence of Information and Communication Technology (ICT) on Project Outcomes (PO)**

The research results show that ICT has a coefficient value of 0.058,  $t_{\text{value}_{\text{stat}}}$  of  $0.048 < 1.96$  and  $p_{\text{value}} 0.672 > 0.05$  (significant). That Information and Communication Technology (ICT) does not have a positive and significant influence on Project Outcomes (PO). Information and Communication Technology (ICT) Factors on Project Outcomes (PO) from the above analysis. ICT Factors do not have a positive and significant influence, this is different from research conducted by Muszynska (2015) which states the importance of communication management in projects which are categorized as informational.

### **Third Objective Research Results**

Based on the results of the second objective analysis, the research results show that KKK has a coefficient value of 0.453,  $t_{\text{value}_{\text{stat}}}$  of  $0.453 < 1.96$  and  $p_{\text{value}} 0.000 < 0.05$  (significant). That Communication Skills and Competencies (KKK) have a positive and significant influence on Project Outcomes (PO). The Communication Skills and Competency Factor (KKK) which shows a positive and significant influence on Project Outcomes (PO) in Tebo Regency, the results of the research show that Construction project stakeholders in Tebo Regency believe that the Communication Skills and Competency Factor (KKK) is the dominant factor that really influences the level of project success in Tebo Regency, where these factors consist of excellent verbal communication between project stakeholders, excellent written communication between project stakeholders, effective use of information technology and communication between project stakeholders, and correct interpretations relating to contractual communications between project stakeholders.

Table 19 Dominant Project Outcome (PO) Factors

Factor	Variable	Communication in Construction Projects
Communication Skills and Competencies (KKK)	FAQ1	Excellent verbal communication between project stakeholders
	FAQ2	Excellent written communication between project stakeholders
	KKK3	Use of information technology and effective communication between project stakeholders
	KKK4	Appropriate interpretations relating to contractual matters are communicated between project stakeholders
Project Outcome	PO1	The scope of construction work has been achieved
	PO2	Quality of project work according to specifications
	PO5	Project budget as planned

**D. Conclusions**

Based on the research results, conclusions can be drawn:

1. From the results of the analysis of project communication factors that influence the level of project success in Tebo Regency, namely (a) Information and Communication Technology (ICT) factors, namely ICT1. Consistent availability of internet and intranet, ICT4 Use of social media communications such as WhatsApp and the like, ICT5 Use of video conference facilities; (b) Communication Skills and Competency Factors (KKK), namely KKK1 Excellent verbal communication between project stakeholders, KKK2 Excellent written communication between project stakeholders, KKK3 Effective use of information technology and communication between project stakeholders, KKK4 Correct interpretation relating to contractually communicated between project stakeholders; (c) Communication Management Plan (RMK) factors, namely, RMK1 Each project personnel is trusted with the information they need to send, RMK2 Communication technology is used in sending information in project implementation, RMK3 There is an appropriate information delivery flow in project implementation, RMK4 Organization clearly identify the recipient of the information sent; (d) Teamwork Factors (KJT), namely, KJT1 There is effective communication and coordination between project stakeholders, KJT2 Conducive working relationships between project stakeholders, KJT3 Efforts of working groups to improve the quality of communication, KJT4 Strong cooperation between units in the project resulted in communication flowing efficiently, and KJT6 Education and training that the project team participated in.
2. The relationship between communication factors and Project Success at the PUPR Service in Tebo Regency can be seen from the analysis carried out, the results of research on factors, (a) Information and Communication Technology (ICT) shows that it does not have a positive and significant influence on Project Outcome (PO); (b) The Communication Management Plan (RMK) factor shows that it does not have a positive and significant influence on the Project Outcome (PO); (c) The Teamwork Factor (KJT) shows that it has less positive and significant influence on the Project Outcome (PO). (d) The Communication Skills and Competency (KKK) factor shows that it has a positive and significant influence on the Project Outcome (PO).
3. After carrying out the analysis stages, it was found that the dominant factor in project success in Tebo Regency was the Communication Skills and Competency (KKK) factor.
4. Regarding the dominant Project Outcome/Project Success (PO) aspects, (a) Aspects of the Scope/scope of construction work achieved; (b) Quality aspects of project work according to specifications; (c) Aspects of the project budget as planned

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