

# **Critical Factors in Public Private Partnership Projects for Railway Projects in Indonesia – (Case Study: Comparison of Solicited and Unsolicited Proposals)**

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**Abstract**— Normally, there are obstacles in implementing and formulating strategies in PPP projects, so business entities need to know what are the critical factors in PPP projects. Therefore, this study aims to identify and obtain critical factors in PPP projects, especially to determine the potential of Business Entities in railway projects and railway projects both with solicited and unsolicited schemes in accordance with projects announced by the Government to use the PPP scheme. This study uses literature analysis to obtain variables derived from Law No. 23 of 2007 concerning Railways, Presidential Regulation No. 38 of 2015 concerning Government Cooperation with Business Entities in the Provision of Infrastructure, Regulation of the Minister of PPN No 4 of 2015 and its amendments concerning Procedures for Implementing Government Cooperation with Business Entities in the Provision of Infrastructure, as well as distributing questionnaires to obtain primary data. The results of this study are that the government's goal is that 64% of project financing in 2030 will come from alternative financing, one of which is through a solicited or unsolicited PPP scheme. Business entities have the opportunity to initiate projects that are registered in the government's plan as one of the requirements of the PPP scheme. However, there are 10 critical factors that significantly affect the railway project with the PPP scheme, namely land acquisition, government support, government guarantees, infrastructure development, railway infrastructure - rail lines, network master plans with other modes, railway infrastructure – rail operation facilities, feasibility studies, railway master plans, and PJKK. In addition, legal and institutional aspects influence the solicited PPP project scheme.

**Keywords**— PPP projects, infrastructure, railway projects.

## **I. INTRODUCTION**

Economic growth is inseparable from infrastructure growth. The World Economic Forum (WEF), which annually publishes a global competition index, states that infrastructure is the second pillar after institutional. Infrastructure is important because it is one of the determinants of the economy. A well-connected

geographic area generally makes its citizens more prosperous. Good infrastructure can also lower transportation and transaction costs, facilitate the movement of goods, people and information transfer, and ensure access to water and power which are necessary conditions for modern economic activity (The Global Competitiveness Report, 2018).

The Global Competition Index in 2019 shows that Indonesia ranked the 50th out of a total of 141 countries which previously ranked 45th out of a total of 140 countries. The global competition index has pillars of assessment criteria, namely institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labor market, financial system, market size, business dynamism, and ability to innovate. The infrastructure competitiveness index in Indonesia ranks 72 out of 141 countries. In the infrastructure assessment, there are several assessment components, namely the overall quality of infrastructure, road quality, railway quality, port quality, air transportation quality, airline seat availability (in USD million/week), electricity supply quality, cellular phone subscriptions, and a fixed telephone line. Meanwhile, the type of infrastructure in Indonesia is described in more detail in Article 5 paragraph (2) of Presidential Regulation No. 38 of 2015 concerning Government Cooperation with Business Entities in Infrastructure Provision.

One of the assessments of the Global Competitiveness Index is the quality of railroads. The rail transportation mode has great potential to be developed but has not been optimized. In 2017, it was recorded that the operating train lines were still focused on Java Island and parts of Sumatra with a total length of 5,168 km with a status of 2,989 km of the total length of which were trains that were not operating or 57.8% of the train lines were not operating (Presidential Decree 2128 year 2018). The government will further plan for the railway network to reach a total of 10,524 km by 2030.

However, in the implementation and formulation of strategies in PPP projects, of course there are obstacles so that business entities need to know what the critical factors in PPP projects are. Therefore, this study aims to identify and obtain crisis factors in PPP projects,

especially for railway projects with both solicited and unsolicited schemes in accordance with projects announced by the Government to use the PPP scheme.

The purpose of this study is to determine the potential of business entities in railway projects and to identify and obtain critical factors contained in PPP projects, especially for railway projects with both solicited and unsolicited schemes so that they can provide solutions to the parties involved.

**II. METHODOLOGY**

The research process describes the stages in detail that will be carried out by the author. Based on the research strategy, the research process consists of two stages that are not related to each other so that it can be carried out in parallel.

**1. Research Process 1**

In the research process 1, to answer the first research question, there are two processes that are carried out in parallel, namely those related to business entities and railway plans. The data obtained at the initial stage is to obtain a database of business entities obtained from the list of members of the construction service association and government regulations and plans which are contained in the list as follows:

- a. PPP Book Plan 2019 regarding Government Cooperation Plans with Business Entities
- b. Decree of the Minister of Transportation Number 2128 of 2018 concerning the National Railway Master Plan
- c. Presidential Regulation Number 55 of 2018 concerning the Jabodetabek Transportation Master Plan

- d. Presidential Regulation No. 18 of the Year concerning the Medium Term Development Plan

**2. Research Process 2**

In the research process to answer the second research question, researchers used literature as secondary data to obtain variables and questionnaires to obtain primary data.

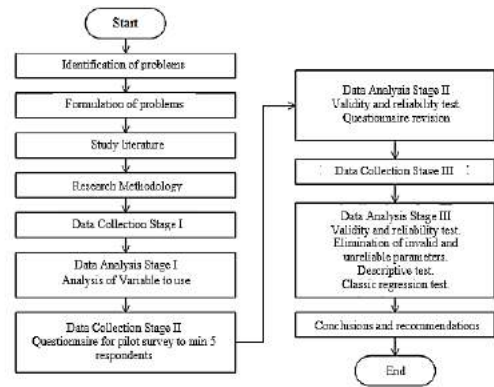


Figure: Illustrates the research framework.

**III. RESULTS AND DISCUSSION**

**1. What are the opportunities for business entities for railway projects in Indonesia?**

The number of business entities registered in Indonesia and registered with the Construction Services Development Institute (LPJK) are 130,384 National Public, 203 Foreign General, 13 Foreign Investment Specialists, 194 Foreign Investment General, 6,134 National Specialist. LPJK also classifies that Construction Service Business Entities are divided into three business classifications, namely Small Business Qualifications, Medium Business Qualifications, and Large Business Qualifications.

Table 1. Project Name and Qualification Requirements

No	Project	Qualification
1	Construction of Railway Electric Substation Between Yogyakarta - Klaten	EL006 EL011
2	Construction of Railway Facilities for Bekasi to Cikarang "Bekasi Station Building Work"	BG004 SI003
3	Construction of Railway Facilities for Manggarai to Jatinegara (Package A) (Phase II) "Main line I Work"	SI003 SI004 BG004 BG009
4	Construction of Railway Facilities for Manggarai to Jatinegara (Package A) (Phase II) "Operational Facility Work"	BG009 EL006 EL008 EL009 EL011
5	Double Track Railway Construction of New Yogyakarta International Airport from KM 507+600 to KM 507+680 and KM 0+000 to KM 1+435	SI003 SI004 BG004 BG009 EL011

6	Double Track Railway Construction from Km. 1+600 S/D Km. 4+200 and construction of Bh.21, Bh.22 Between Bogor Paledang - Batu Tulis Through Bogor- Sukabumi	SI003 SI004
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The list of projects in table 4.1 concludes that a business entity that can participate in a railway project in Indonesia is a business entity that has the following business qualifications:

1. SI003 for the qualification of Highway Construction Services (except Flyovers), Roads, Railroads, and Airport Runways.
2. SI004 for the qualification of Construction Services for Bridges, Overpasses, Tunnels and Subways
3. BG004 for Implementing Services For Commercial Building Construction
4. BG009 for the qualification of Implementing Services for Construction of Other Buildings
5. EL006 for Construction Services for Medium Voltage Power Distribution Networks
6. EL009 for the qualification of Control System and Instrumentation Installation Implementation Services
7. EL011 for qualification of Other Electrical Installation Construction Services

The PPP bookplan from Bappenas, the National Railway Master Plan from the Ministry of Transportation, the Jabodetabek Transportation Master Plan from the Jabodetabek Transportation Management Agency, and the Medium-Term Development Plan from Bappenas contain information on the list of railway projects and project implementation plans from 2018-2034. Based on this information, it can be concluded as follows:

1. 247 Railroad projects that require SI003 qualification, 217 of them require additional SI004 qualification and 124 of them require BG004 qualification
2. 23 Electrification, signaling systems, telecommunications, overhead power projects requiring EL009 and EL011 qualifications
3. 9 Overflow Power Transmission (LAA) Projects Including BG009, EL006, EL009, and EL011 Electrical Substations
4. 2 Electrical substation projects and special buildings that require BG009. qualification

**2. What are the critical factors that need to be considered for the successful implementation of a Railway Project in Indonesia?**

**2.1 Data Analysis Phase I**

The first stage of data analysis is to identify the variables that will be used in this study through a literature review. In this analysis, a comprehensive literature study was

carried out so that it could be concluded that the independent variable and the dependent variable were concluded. The dependent variable consists of three main variables that become critical in every railway project with the PPP scheme, namely technical aspects, legal & institutional aspects, and financial aspects. While the independent variables consist of two, namely the solicited PPP and the unsolicited PPP. The Bound Variable (Variable X) is a variable that is affected or is the result of an independent variable (Sugiyono, 2014). Based on the literature review on the research of Yun, Jung, Han, and Park (2012), Law No. 23 of 2007, Government Regulation No. 59 of 2007 and Presidential Regulation No. 38 of 2015, the following are the details of the parameters of the dependent variable as follows:

Table 2: Variable X

<b>X.1. Technical Aspect</b>	
X.1.1.	Rolling Stock
X.1.2.	Railway Infrastructure - Railroad
X.1.3.	Railway Infrastructure – Train Station
X.1.4.	Railway Infrastructure – Railway Operation Facilities
X.1.5.	Infrastructure Construction
X.1.6.	Infrastructure Operation
X.1.7.	Infrastructure Operation
X.1.8.	Procurement of Rolling Stock
X.1.9.	Rolling Stock Operation
X.1.10.	Rolling stock maintenance
X.1.11.	Rolling stock Business
X.1.12.	Tansport
X.1.13.	Fare Transport
X.1.14.	Transport needs plan
X.1.15.	Infrastructure needs plan
X.1.16.	Rolling stock needs plan
X.1.17.	HR needs plan
X.1.18.	Pre-Feasibility Study
X.1.19.	Feasibility Study
<b>X.2 Legal and Institutional Aspect</b>	
X.2.1.	Railway master plan
X.2.2.	Spatial plan
X.2.3.	Network and other mode master plan
X.2.4.	Infrastructure maintenance permit
X.2.5.	Rolling stock operation permit
X.2.6.	Government central agency (PJPK)
X.2.7.	Business entities procurement by auctions
X.2.8.	Business entities procurement by appointment

<b>X.3 Financial Aspect</b>
X.3.1. Land procurement
X.3.2. Return on investment by fare
X.3.3. Return on investment by availability payment
X.3.4. Return on investment by other form to the extent permissible
X.3.5. Compensation alternative
X.3.6. Government guarantee
X.3.7. Government support
X.3.8. PPP transaction

The independent variable or what is often called the stimulus, input, predictor, and antecedent variables is the variable that causes the dependent variable to arise or change (Sugiyono, 2014). The Independent Variable (Variable Y) in question is as follows

- Y1 : PPP solicited
- Y2 : PPP unsolicited

After determining the variables, the next step is to classify indicators for each variable based on Ministerial Regulation Number 4 of 2015 and its amendments. The indicators for these two variables are as follows:

Table 3: Y1 and Y2. Variable Indicators

Indicator	Solicited	Unsolicited
<b>Initiator</b>	Government/PJ PK	Business entity The business entity submits a statement of intent
<b>Project Terms</b>	Included in the government plan (national development planning document / list of PPP plans)	Based on Article 40 of the Ministerial Regulation of Bappenas 2 of 2020: Technically integrated with the master plan in the sector concerned and PPPs on the initiative of the Business Entity can be sourced from programs/activities/projects listed in the development plan as long as the Feasibility Pre-study has not been prepared.
<b>Appropriateness</b>	Economically and financially viable, or economically viable but not financially viable	Economically and financially viable
<b>Preparation</b>	Conducted by the Government or preparatory agency (pre-	Conducted by the prospective initiating business entity (pre-feasibility study and feasibility study)

	feasibility study)	
<b>Auction compensation</b>	Nothing	There is 1. Giving additional value of 10% (ten percent) 2. Right to match 3. PPP initiative purchase
<b>Government support</b>	There is	Nothing
<b>Procurement mechanism</b>	Auction Appointment	Auction Appointment
<b>Government guarantee</b>	There is, Indonesia Infrastructure Guarantee Corporation	There is, Indonesia Infrastructure Guarantee Corporation

### 2.2 Data Analysis Phase II

The first phase of the questionnaire was distributed and then analyzed for the pilot survey using validity and reliability tests. The pilot survey was conducted on the first 11 respondents from 2 Government Agencies, 4 Consultants, and 5 Contractors. The table below is a summary of the results of the validity and reliability tests on variables Y1 and Y2

Table 4: Summary of validity and reliability test results on variables Y1 and Y2

Parameter	Validity Test Results	Reliability Test Results
<b>X1</b>	2 of the 19 (10.5%) parameters are invalid, namely the X1.17 and X1.18 parameters. While 89.5% valid	19 parameters (100%) reliable.
<b>X2</b>	1 of 8 (12.5%) parameters are invalid, namely the parameter X2.8. While 87.5% valid	8 parameters (100%) reliable
<b>X3</b>	4 of the 8 (50%) parameters are invalid, namely the parameters X3.2, X3.3, X3.6, and X3.8. While 50% valid	8 parameters (100%) reliable
<b>Y1 . indicator</b>	2 out of 8 (25%) parameters are invalid, namely the parameters Y1.7 and Y1.8. While 75% valid	8 parameters (100%) reliable

Parameter	Validity Test Results	Reliability Test Results
<b>X1</b>	19 out of 19 (100%) invalid parameters, namely the parameters X1.1-X1.19	19 parameters (100%) reliable
<b>X2</b>	4 out of 8 (50%) parameters are invalid, namely the parameters	7 of the 8 parameters (87.5%) are

	X2.1, X2.4, X2.5, and X2.6	not reliable, namely the variables X2.1, X2.3 – X2.8. While 12.5% reliable
<b>X3</b>	8 out of 8 (100%) invalid parameters, namely in parameters X3.1 – X3.8	8 parameters (100%) reliable
<b>Y2 . indicator</b>	13 of 13 (100%) invalid parameters, namely in parameters Y2.1 – Y2.13	8 parameters (100%) <b>reliable</b>

Based on these results, the authors analyze the causes of invalid and unreliable results, namely:

1. Questionnaire format that makes respondents ambiguous
2. The use of sentences that make the respondent ambiguous
3. There is an error due to repeated use of parameters
4. The least respondents who choose the variable Y2

The results of this pilot survey were further improved by taking into account the invalid and unreliable results and then correcting the questionnaire to be sent back to the respondents.

### 2.3 Phase III Data Analysis

After the pilot survey was conducted, the second phase of the questionnaire was distributed back to the research respondents who came from consultants, contractors, and government agencies. The second stage of the questionnaire was distributed to 36 respondents and returned a total of 30 or with a rate of return of 83.3%. Based on a total of 30 respondents, 23 respondents or 77% chose the solicited PPP project as the most appropriate PPP scheme for the railway project.

#### 2.3.1 Validity and Reliability Test

#### 2.3.2 Descriptive Test

After testing the validity and reliability, the next step is to perform a descriptive analysis of the dominant and significant parameters. The table below is the result of descriptive analysis:

Table 5: Descriptive Analysis Results

No	Parameter	mean	Percentage of Answers				
			1	2	3	4	5
1	X1.1	3.6000	3%	13%	27%	33%	23%
2	X1.2	4.3667	0%	3%	7%	40%	50%
3	X1.3	4.0667	0%	7%	20%	33%	40%
4	X1.4	4.2333	0%	3%	13%	40%	43%
5	X1.5	4.4333	0%	3%	3%	40%	53%
6	X1.6	3.9000	0%	10%	20%	40%	30%
7	X1.7	3.9000	0%	10%	20%	40%	30%
8	X1.8	3.6333	0%	23%	17%	33%	27%
9	X1.9	3.5000	7%	17%	23%	27%	27%
10	X1.10	3.4000	7%	23%	17%	30%	23%
11	X1.11	3.4000	7%	17%	27%	30%	20%
12	X1.12	3.5667	3%	7%	40%	30%	20%
13	X1.13	3.9667	3%	10%	10%	40%	37%
14	X1.14	3.7333	0%	13%	23%	40%	23%
15	X1.15	4.0333	0%	3%	17%	53%	27%
16	X1.16	3.5667	0%	17%	30%	33%	20%
17	X1.17	3.6333	0%	17%	23%	40%	20%
18	X1.18	4.1333	0%	3%	10%	57%	30%
19	X1.19	4.2000	0%	7%	13%	33%	47%
20	X2.1	4.1667	0%	10%	7%	40%	43%
21	X2.2	4.1667	0%	10%	7%	40%	43%
22	X2.3	4.3000	0%	10%	3%	33%	53%
23	X2.4	4.1000	0%	10%	10%	40%	40%
24	X2.5	4.0333	0%	7%	17%	43%	33%
25	X2.6	4.1667	0%	7%	13%	37%	43%
26	X2.7	4.0667	0%	7%	13%	47%	33%
27	X2.8	3.3000	7%	20%	23%	37%	13%
28	X3.1	4.8333	0%	0%	3%	10%	87%
29	X3.2	4.1667	3%	3%	10%	40%	43%
30	X3.3	4.0667	0%	7%	20%	33%	40%
31	X3.4	4.0000	0%	10%	17%	37%	37%

32	X3.5	4.0000	0%	3%	23%	43%	30%
33	X3.6	4.5333	0%	3%	3%	30%	63%
34	X3.7	4.6333	0%	0%	0%	37%	63%
35	X3.8	4.1667	0%	0%	20%	43%	37%

Based on the table above, to determine the critical factors, two analyzes were carried out, namely dominant factor analysis and significant factor analysis. Analysis

of significant factors obtained by ordering the highest mean. The higher the mean, the more influential these parameters.

*Table 6.: Parameters that have significant factors*

No	Parameter	Mean	Percentage					Remark
			1	2	3	4	5	
1	X3.1	4.83	0%	0%	3%	10%	87%	Land Procurement
2	X3.7	4.63	0%	0%	0%	37%	63%	Government support
3	X3.6	4.53	0%	3%	3%	30%	63%	Government guarantee
4	X1.5	4.43	0%	3%	3%	40%	53%	Infrastructure construction
5	X1.2	4.37	0%	3%	7%	40%	50%	Railway infrastructure - railroad
6	X2.3	4.30	0%	10%	3%	33%	53%	Network and other mode master plan
7	X1.4	4.23	0%	3%	13%	40%	43%	Railway infrastructure - railway operation facilities
8	X1.19	4.20	0%	7%	13%	33%	47%	Feasibility Study
9	X2.1	4.17	0%	10%	7%	40%	43%	Railway Master Plan
10	X2.6	4.17	0%	7%	13%	37%	43%	PJPK

The following is a discussion of each of the factors that have the most significant influence so that it can be concluded to be a critical factor for railway projects with PPP schemes.

**1. Land procurement**

Land procurement based on Presidential Regulation No. 38 of 2015 is sourced from the APBN/APBD which is then carried out by the Government in accordance with the provisions of the laws and regulations regarding land acquisition for development in the public interest.

Based on the source of funds, land acquisition is one of the government's support. Based on the comparison parameter classification between solicited and unsolicited schemes, in the unsolicited scheme land acquisition is the responsibility of the business entity to obtain financially and economically feasible results without government support.

This becomes significant in project implementation for business entities because it is feared that there will be failures in the implementation of land acquisition starting at the time of land acquisition which could result in delays in project implementation.

**2. Government support**

Government support according to Presidential Decree No. 38 of 2015 is a fiscal contribution and/or other forms in the form of eligibility support and/or tax incentives. Research conducted by Yun, Jung, Han, and Park (2012) that financial support from the government is a significant factor for both solicited and unsolicited schemes.

**3. Government guarantee**

The government guarantee is a critical factor because it provides a sense of security for business entities to decide to use the PPP scheme so that if there is a failure in project implementation, the government guarantee can be disbursed. Government guarantees are provided by the government through PT Penjaminan Infrastruktur Indonesia and can be provided for solicited or unsolicited PPP schemes.

**4. Infrastructure construction**

Infrastructure construction is part of the implementation of infrastructure and becomes a significant part of the railway project with the PPP scheme which is of course expected to be of the right quality, timely and efficient. Project implementation is also a significant factor for PPP schemes as concluded from the research of Yun, Jung, Han, and Park (2012)

**5. Railway infrastructure – railroads**

Railway infrastructure for the railway line is a significant factor because the largest project costs come from the railway line and have an impact on the feasibility value and the amount of returns that must be made. Engineering engineering is needed to get an efficient design so that it can reduce project costs. In addition, the main materials such as rails and their crosses cannot yet be provided in Indonesia so that it can have an impact on the procurement process and potential delays. The railway line which plays an important role in accordance with the research of Raharjanto (2011)

**6. Network master plan with other modes**

The master plan for the other transportation mode network includes the general plan for the national road mode network, the national port arrangement, and the national airport arrangement. This plan is also needed to find out which modes are integrated with each other

**7. Railway infrastructure – rail operation facilities**

Railway infrastructure for rail operation facilities is also a factor that affects project costs. Not only that, the use of technology for operating facilities is not much from Indonesia so that it can have an impact on the procurement process and potential delays.

**8. Feasibility study**

The feasibility study aims to obtain the feasibility of the project both economically and financially. The project can be implemented if it meets the eligibility requirements.

**9. Railway master plan**

Only projects listed in the railway master plan can be studied, either initiated by the government (solicited) or initiated by business entities (unsolicited).

**10. PJPk**

PJPk is an influential factor in railway projects under the PPP scheme because it is related to the government budget that can be used. The determination of PJPk is contained in PP No. 56 of 2009. If the railway network passes between districts/cities, then the PJPk is the governor of the relevant area. Meanwhile, if the railway network passes between provinces, then the PJPk is the Minister of Transportation. The government budget is certainly related to budget allocations that can be used as government support and can affect the feasibility of the project.

**2.3.3 Classical Assumption Test (heteroscedasticity and multicollinearity)**

In the regression test, a comparison is made between the solicited and unsolicited PPP schemes based on the factor indicators used. Before the regression test is carried out, it must meet the classical assumption test first.

The heteroscedasticity test was accepted if there were no heteroscedasticity symptoms (significance > 0.05). Multicollinearity test was accepted if there were no symptoms of multicollinearity (tolerance > 0.1 and VIF < 10).

Table 7: Heteroscedasticity test

		Technical Aspect	Legal and Institutional Aspect	Financial and Economical Aspect	Unstandardized Residual	Conclusion	
<b>Spearman's rho</b>	Technical Aspect	Correlation Coefficient	1	.552**	.582**	-0.279	No heteroscedasticity indication
		Sig. (2-tailed)		0.006	0.004	0.197	
		N	23	23	23	23	
	Legal And Institutional Aspect	Correlation Coefficient	.552**	1	0.361	-0.204	No heteroscedasticity indication
		Sig. (2-tailed)	0.006		0.091	0.351	
		N	23	23	23	23	

Financial and Economic Aspect	Correlation Coefficient	.582**	0.361	1	-0.187	No heteroscedasticity indication
	Sig. (2-tailed)	0.004	0.091		0.393	
	N	23	23	23	23	
Unstandardized Residual	Correlation Coefficient	-0.279	-0.204	-0.187	1	
	Sig. (2-tailed)	0.197	0.351	0.393		
	N	23	23	23	23	

Table 8: Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Conclusion
	B	Std. Error	Beta			Tolerance	VIF	
<b>(Constant)</b>	11.11	6.03		1.84	0.08			
<b>Technical Aspect</b>	0.05	0.08	0.15	0.66	0.52	0.44	2.29	No Multi Colinearity
<b>Legal and Institutional Aspect</b>	0.46	0.17	0.53	2.70	0.01	0.61	1.63	No Multi Colinearity
<b>Financial and Economic Aspect</b>	0.20	0.22	0.18	0.89	0.39	0.57	1.75	No Multi Colinearity

2.3.4 Regression Test

In the regression test, the biggest effect is seen from the largest R-square. Table 9 is the result of the regression test on Variable Y1. The Adjusted R Square for the Y1 variable is 0.485. Based on the results of the regression

on the Y1 variable, there is one aspect that affects the solicited scheme, namely the legal and institutional aspects. The other aspects have no effect or no significant effect on the Y1. Variable.

Table 9: Table of Regression Test Results on Variable Y1 (Solicited)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Conclusion
	B	Std. Error	Beta			Tolerance	VIF	
<b>(Constant)</b>	11.11	6.03		1.84	0.08			
<b>Technical Aspect</b>	0.05	0.08	0.15	0.66	0.52	0.44	2.29	No Impact



<b>Legal and Institutional Aspect</b>	0.46	0.17	0.53	2.70	0.01	0.61	1.63	Have impact
<b>Financial and Economic aspect</b>	0.20	0.22	0.18	0.89	0.39	0.57	1.75	No Impact

Table 10 is the result of the regression test on Variable Y2. The Adjusted R Square for the Y1 variable is 0.125. Based on the results of the regression on the Y2 variable, none of the parameters has an effect or significant on the Y2 variable. This is due to the absence of variance of

respondents who chose the Y2 variable. Of the 7 respondents, 6 of them came from contractors who chose the Y2 variable and 1 of them came from government agencies.

*Table 10: Table of Results of the Regression Test on Variable Y2 (Unsolicited)*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Conclusion
	B	Std. Error	Beta			Tolerance	VIF	
(Constant)	32.48	14.20		2.29	0.11			
<b>Technical Aspect</b>	0.41	0.38	1.42	1.08	0.36	0.09	11.81	No Impact
<b>Legal And Institutional Aspect</b>	-1.79	1.87	-1.60	-0.96	0.41	0.05	19.15	No Impact
<b>Financial and Economical Aspect</b>	1.29	0.87	1.38	1.49	0.23	0.17	5.82	No Impact

Based on the results of the multiple regression, it can be concluded that Variable Y1 has significant results compared to Variable Y2. This is because the majority of respondents chose the Y1 variable or the solicited PPP scheme. The majority who chose the solicited PPP scheme came from consultants and contractors. Contractors and Consultants are of the opinion that legal and institutional aspects are the most influential aspects of the PPP scheme.

The results of this multiple regression are in line with previous research from Yun, Jung, Han, and Park (2012) that leadership and government cooperation are significant factors in solicited projects.

**IV. CONCLUSION**

The conclusions obtained from this study consist of three, namely:

1. The potential of business entities for railway projects in Indonesia is high considering that 64% of funding sources for railway projects are expected to come from alternative funding, one of which comes from PPPs. There are about 11 State-Owned Enterprises

that can meet the qualifications to participate in the railway project.

2. There are 10 critical factors that significantly affect railway projects with PPP schemes that need to be considered, namely land acquisition, government support, government guarantees, infrastructure development, railway infrastructure - rail lines, network master plans with other modes, railway infrastructure - rail operation facilities, feasibility study, railway master plan, and PJKP. In the comparison between solicited and unsolicited PPP schemes, legal and institutional aspects influence the solicited PPP scheme, while in the unsolicited scheme there is no significant effect. Referring to the research results, the solutions to avoid the ten critical factors are as follows: certainty of land use, improving the legal and institutional framework to facilitate and facilitate PPP projects.

**ACKNOWLEDGMENT**

On this occasion, the author would like to express gratitude because with the permission of Allah SWT the author can complete this manuscript. The author also

does not forget to express his deepest gratitude to his husband who has supported him, his family for their prayer assistance, and also the supervisor who has never stopped giving input and suggestions to the author.

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