

## THE ROLE OF COLLABORATION LEVELS IN THE INFLUENCE OF TRUST LEVEL ON PROJECT MANAGEMENT SUCCESS AT DEVELOPER COMPANIES IN BATAM

Agustinus Setyawan <sup>1)</sup>, Annalin <sup>2)</sup>

<sup>1,2)</sup> Universitas Internasional Batam, Indonesia

Corresponding author: agustinus.setyawan@uib.ac.id

### Abstract

*This study aims to determine and analyze the effect of the trust levels which include trust, exchange of knowledge, and expectations on project management success which includes project performance, and integration of knowledge and innovation through mediation of collaboration levels which include incentive, proximity, relationship, conflict, coordination, and commitment on developer companies in Batam. The survey conducted for this study was by distributing questionnaires to 275 respondents. The sample selection method uses purposive sampling method, which the selection of samples is in accordance with predetermined conditions that the respondents came from 5 developer companies in Batam with a total of 258 complete data to be processed. The researcher used the SPSS and Smart PLS programs to examine the effect of the independent variable on the dependent variable through the mediating variable. The results of this study indicate that the variable trust levels have a significant effect on the variable collaboration levels and project management success. However, the variable collaboration levels do not have a significant effect on the variable of project management success. Likewise, the variable of trust on variable of project management success through mediation of collaboration levels does not have a significant effect. So, it can be said that the higher the trust levels, the higher the collaboration levels and project management success will be. On the other hand, there is no influence between collaboration and project management success.*

**Keywords:** Trust Levels, Collaboration Levels, Project Management Success

### Introduction

Based on the Central Statistics Agency, Indonesia is an archipelago with 34 provinces, which is the 4th most populous country in the world. This population density is caused by the rapid growth of Indonesia's population. The province in Indonesia with the highest population growth rate in 2010-2016 is the Riau Islands Province (Riau Islands). In the Riau Islands Province itself, it is divided into 7 regions with 2 cities and 5 districts, namely Batam, Bintan, Karimun, Anambas Islands, Lingga, Natuna, and Tanjung Pinang. The area with the highest population growth rate is Batam City, with an average increase of around 46,390 each year.

The increasing population of Batam means that the need for housing in Batam City continues to increase as well. In line with the increasing demand for property, Batam City has become one of the cities for developing developers with a number of projects that are currently running and will be implemented in the future, making developer companies more competitive in maximizing project development. Therefore, companies in the developer sector should know the factors that influence the success of project management, starting from increasing trust, building expectations, and exchanging knowledge to get incentives, building relationships, closeness, commitment, and good coordination. In general, project management is the science of planning, executing and controlling to achieve the goals of project activities. The main goal of the project is to achieve success by overcoming various obstacles during the project work process and the limitations that exist in the project so as to provide satisfaction to customers.

Zailani et al., (2016) said that the critical success factor for project management is through information sharing, communication, and collaboration with all stakeholders. Meanwhile, poor project performance can be reduced effectively by improving certain aspects of maintaining relationships and coordinating with project partners, which helps overcome project performance problems (Meng, 2012).

Henderson et al., (2016) show that the trust and collaboration of project teams have a diverse and interrelated relationship with project success. The strong relationship between trust and collaboration validates previous research which found that trust and respect are the second most important indicators of team integration practice (Ibrahim et al., 2015). In addition, the requirement to trust other team members and acknowledge that they strive to achieve the best possible outcome (i.e. hope) is one of the most fundamental differences in a collaborative approach according to Ibrahim et al., (2015).

The success of project management is very important considering the number of projects that will emerge in the future due to developments that are wanted to be carried out to continue to improve the state of infrastructure. One of the projects that is currently in the initial development program is Batu Ampar port in Batam City. The project, which has the aim of creating new markets and encouraging industrial growth in Batam City, began work in March 2020 with a target of completion in September 2020. This shows that in a project there is a target, namely a given project work period so that knowledge and management are needed.

good and true about how a project is done. For that, we need to know what the factors of successful project management are so that a project is done according to plan and can satisfy the client.

Based on the background described, it is necessary to conduct research in order to determine the effect of the level of trust on the success of project management with the level of collaboration as mediation. To find out the factors that influence the success of project management so that conclusions can be made about how to achieve project management success. So, the authors conducted a study entitled "Effect of Trust Level on the Success of Project Management Through Mediation of Collaboration Levels at Developer Companies in Batam".

### **Literature Review**

According to Radujković and Sjekavica (2017) project management is the planning, organization, monitoring and control of all aspects of a project, with all-inclusive motivation to achieve project objectives in a safe manner, within an agreed schedule, budget and performance criteria. This can be seen from the definition of project management, which focuses on project performance, regarding the short-term dimensions of project success. To achieve project management success, project managers need not only soft skills to motivate team member contributions but also to access the hard skills (tools and techniques) needed to monitor and control project activities (Singh and Tan, 2010).

According to Bond-Barnard et al., (2018) project management success includes project performance and integration of science & innovation. Project performance is concerned with the achievement and continuous measurement of the determinants of the project, time, cost and quality to determine the relative success of the project. Project performance is very important as a determinant of project management success, because project effectiveness needs to be considered regularly throughout the project in order for the project to be relatively successful (Mir and Pinnington, 2014).

Knowledge integration is the effective use of ideas and information by a project team or organization (Cambridge University Press, 2017). Innovation involves the deliberate application of information, imagination and initiative to derive greater or different value from resources and includes all processes by which new ideas are generated and turned into useful products (Web Finance Inc., 2017). Knowledge integration and innovation is a product of knowledge exchange and collaboration supported by an environment of trust. Research shows that the right level of collaboration between customers and suppliers reduces control costs, reduces the likelihood of failure and creates the potential for innovation and learning (Bond-Barnard et al., 2018). Dietrich et al., (2010) found that higher project performance is associated with knowledge transfer mechanisms that actively promote information exchange within organizational units. To achieve successful project management, an intermediary is required for knowledge exchange, which allows new external knowledge to be imported and integrated with existing internal knowledge so that knowledge can be integrated into the project.

The key to the success of collaborative innovation is people (Fawcett et al., 2012), but companies continue to invest in technology, information, and measurement systems. Managers must not neglect training, learning, and the choice of the right people to work with and interact with. Among the elements of organizational culture, trust enables companies to turn knowledge and learning initiatives into tangible performance indicators recognized by financial markets (Revilla & Knoppen, 2015).

Pomponi et al., (2015) stated that a lack of trust can harm the goals being pursued and destroy the company's efforts to collaborate. According to Leitner et al., (2011) trust plays a major role in the practicality of collaboration, such as information and sharing of knowledge, both of which are the main critics. Based on the research results (Markon et al., 2017), it shows that trust has a positive relationship with collaboration, namely collaboration is a mediator in the relationship between trust and performance.

According to Chiochio et al., (2011) situation-appropriate teamwork interactions, communication, synchronicity and coordination have also been found to enhance collaboration in projects which are team performance factors for successful project management.

Leadership and collaboration are two of the most important attributes of successful project management, these qualities must be recognized and maintained by team members to assist them in coordinating their activities effectively, thus providing a communication link between management and the work team. Professionalism begins at the earliest stages of a student's university education. Mentors in any discipline, from the early stages of training, can serve as models and thus influence students' attitudes and behavior in collaborative work and the way they act and act as future professional managers (Mazzetto, 2018).

Zhang et al., (2018) stated that the effectiveness of virtual collaboration affects project results in terms of the success of performance-based project management and experience-based team appreciation. Conceptualizing and operationalizing the effectiveness of virtual collaboration helps to capture the overall alignment between technology, people and processes in collaborative design and construction (Liu et al., 2017). Rezvani et al., (2016) explain that top management must realize the importance of job satisfaction and project manager trust, both of which can serve to increase project success in complex project situations. Trust is an attitude variable that implies an emotional bond that links emotional intelligence and project success. Thus, emotionally intelligent project managers develop trust with their team by creating emotional bonds

with their team members, and this relationship is then reflected in project success factors, including communication, mission clarity, problem solving, and top management support.

Calculative belief is based on human rationality and considers how the behavior of others will benefit one's own interests. Relational trust is the result of good working together i.e., interpersonal relationships that make project progress smoother. Relational trust can promote cooperation between two parties, improve project team coordination, and assist in the development of common goals for achieving project success. Based on the above arguments, this study assumes that calculative and relational trust are positively related to project success (Jiang et al., 2016).

### Conceptual Framework

The conceptual framework in this research design as a basis for formulating hypotheses and further analysis processes. Therefore, as described above, the proposed research design can be seen in Figure below.

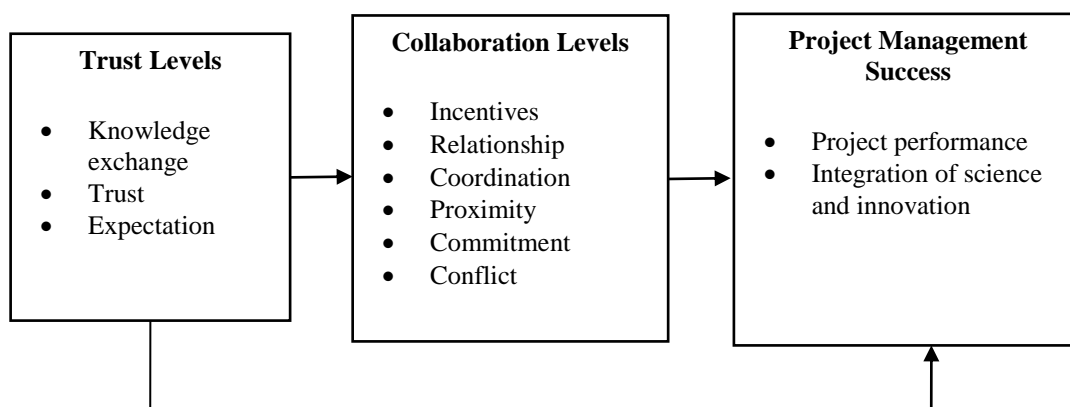


Figure 1. Conceptual Framework

### Research Hypothesis

H1 : There is a significant influence between the level of trust and the level of collaboration.

H2 : There is a significant influence between the level of collaboration and project management success.

H3 : There is a significant influence between the level of trust and project management success.

H4 : There is a significant influence between the level of trust and project management success with the level of collaboration as mediation.

### Methods

The type of research used is quantitative research. The population and sample are all employees of 5 (five) developer companies in Batam with the total of 258 employees. The sampling technique used was nonprobability sampling technique with purposive sampling type. Quantitative data is the type of data used in this study obtained from the results of the distribution of questionnaires with a Likert scale as the measurement scale. Data sources that are used in this study are primary data that can be obtained from questionnaires, while the secondary data can be obtained from literature relating to research such as books, journal sources, internet, and others. Researchers tested the model using the SEM-PLS method. Structural Equation Modeling (SEM) is a method that is able to see the causal effect between variables in a structural model as a whole. PLS is a SEM method that can be used to examine small numbers of samples.

Descriptive statistical data analysis in this study was conducted to determine the demographic description of the respondents. At this stage, the data is processed into a tabulated data format so that it is easier to understand. This analysis contains information in the form of demographic data from respondents, such as gender and position of respondents.

Podsakoff et al., (2003) stated that CMB is a problem that arises in the research process because it causes errors during the testing or data measurement process. There are many errors in systematic data assessment, one of which is the variance method which can come from any source (Bagozzi and Yi, 1991). The method most often used by the majority of previous researchers to prove the issue of CMB is the Single Factor Test or it can be called Harman's one factor. The principle of Harman's single-factor test is determining whether most variants can be explained by one common factor by means of all items included from all research constructs in a factor analysis. It is recommended that in each study there is no single factor that achieves a variance greater than 50% so it can be indicated that in this study there was no CMB.

Outer loadings, which is often referred to as the outer model, are the values that are an indicator of whether or not the questions on the questionnaire are valid. As well, outer loading is the value of each indicator's factor against the variable. A question will be declared valid if the value of outer loading is equal to or greater than 0.5 (Sarwono, 2016).

Each construct can be tested for validity using Average Variance Extracted (AVE). The condition for a construct can be said to be valid if the value of AVE is more than 0.5. This test is to ensure that the questionnaire distributed is reliable so that the data collected can be accurate. The reliability of each variable can be viewed from the table on Cronbach's alpha value. A variable can be said to be reliable if the value of Cronbach's alpha is  $> 0.5$  (Ghozali, 2011). The inner model aims to estimate the correlation between potential variables, there is a direct relationship, namely the direct effect. There is also an indirect relationship, namely the Indirect effect by using a mediating variable.

According to Ghozali and Latan (2012), Path coefficients show how much impact a potential variable has on other potential variables. An understanding of the relationship between these variables can be observed in the table of the path coefficients section listed in the T-Statistics column. A relationship can be declared significant with a significance level of 5% if the T-statistics value  $> 1.96$  or the value of the P-value is less than 0.05 (Hair et al., 2011). Indirect effect of 0.035 indicates that perceived quality indirectly affects brand equity by 0.035. This effect is not significant because the t-statistics value is less than 1.96 and the p-value is more than 0.05.

R square shows the percentage of model alignment. The value of R Square is how much the percentage of the alignment of the model or the value shows how much influence the independent variable has on the dependent variable. Between 0 and 1 is the coefficient of determination. If the value of R Square is small, it means that the capabilities of the intervening variables and independent variables in describing are limited, if the value of R Square is higher (close to number 1), the more or more complete information is needed in estimating the independent variables (Ghozali, 2011).

The Quality Index test serves to determine whether or not a research model is good as a whole. The resulting model will be better if the GoF value is higher. Ghozali (2012) recommends a communality value of 0.5, and a small R Square value = 0.02, Medium = 0.13, and Large = 0.26, then: GoF Small = 0.10, GoF Medium = 0.25, and GoF Large  $\geq 0.36$ . How to calculate the quality index can be measured by determining the GoF Index as follows:

$$\text{GoF} = \sqrt{(\text{Comm} \times R^2)}$$

Information:

GoF : Goodness of Fit criteria to measure model accuracy  
Comm : Average of communalities (AVE)  
R2 : Average of R squared

## Result and Discussion

### Descriptive Statistics

The data collected to be processed in the study is primary data, the researcher directly distributes questionnaire sheets to respondents, then they are collected and analyzed. There are 275 questionnaires given to developer companies in Batam, the questionnaires given, 272 questionnaire data returned to researchers and 3 data that did not return and 14 data were incomplete so they could not be tested, and there was no outlier data so that the data could be analyzed there are 258 sheets of questionnaire. The population sampled as respondents were 5 developer companies in Batam that were registered at the Riau Islands Province Manpower and Transmigration Office for the period 2014 to July 2019.

Based on all respondent data collected with a total of 258 respondents, 218 respondents or 84.5% of respondents were male and 40 respondents or 15.5% of respondents were female employees. So, it can be concluded that the male respondents were more than female in this study.

Data based on age, it is known that respondents consisted of 151 respondents or 58.5% of respondents were aged 20-29 years, 92 respondents or 35.7% of respondents were aged 30-39 years, 12 respondents or 4.7% were aged 40-49 years, 2 respondents or 0.8% aged 50 - 59 years, and 1 respondent or 0.4% aged 60 years and over.

Data based on position, it is known that the respondents consisted of 10 respondents or 3.9% of respondents were a leader, 198 respondents or 76.7% of respondents were team members, 2 respondents or 0.8% were a sponsor / client, 14 respondents or 5, 4% are a stakeholder, and 34 respondents or 13.2% are other jobs or occupations other than those stated.

### Common Method Biases (CMB)

Based on the results of Harman's single factor tested, the variance value in the study using the SPSS program was 43.598% or less than 50% which indicates that common method biases did not occur. This is because the source of the data collected comes from respondents who have met the appropriate criteria, namely those who work in developer companies.

### Outer Loading Test Results

Based on the results of the outer loading test, questions are declared valid if the sample mean shows a number more than 0.5 and invalid if it is less than 0.5. The processed data shows that all questions are valid.

### Validity Test Results

The purpose of the validity test is to assess how accurate the research questionnaire is. If the Average Variance Extracted (AVE) value is greater than 0.5, the data is declared valid. Table 1 shows the results of the study in which all variables were declared valid.

**Table 1.** Validity Test Results

Variable	AVE	Conclusion
Trust Level	0,533	Valid
Collaboration Level	0,517	Valid
Project Management Success	0,574	Valid

The confidence level variable shows an AVE value of 0.533, which means that the data is declared valid because it has an AVE value above 0.5. The collaboration level variable is also declared valid with a value of 0.517 because the value is above 0.5. Then the project management success variable which has a value of 0.574 is also declared valid because it is above 0.5.

### Reliability Test Results

The purpose of the reliability test is to ensure and test the reliability of the questionnaire distributed to obtain primary data. The variable will be declared reliable if it has a Cronbach's Alpha value of more than 0.5 (Ghozali, 2011). The results of the study in table 2 show that all variables are reliable.

**Table 2.** Reliability Test Results

Variable	Cronbach's Alpha	Conclusion
Trust Level	0,889	Reliable
Collaboration Level	0,950	Reliable
Project Management Success	0,848	Reliable

The confidence level variable has a Cronbach's alpha value of 0.889, which means that the variable is reliable because the value is more than 0.5. The collaboration variable has a value of 0.950, which means that the variable is also reliable because it is more than 0.5. And the variable of project management success is also reliable because the Cronbach's alpha value of this variable is 0.848 which means more than 0.5.

### Inner Model

The inner model is carried out with the aim of knowing the relationship between latent variables, the relationship that occurs is a direct effect, there is also a relationship that occurs indirectly through the mediating variable or Indirect effect. A variable can be said to be significant if it has a P-values <0.05 or a T-statistics of more than 1.96 (Hair et al., 2011).

**Table 3.** Hypotheses Testing

Variable <i>Direct Effect</i>	T-statistics	P-values	Conclusion
Trust Level → Collaboration Level	31,770	0,000	H1: Significant
Collaboration Level → Project Management Success	0,304	0,762	H2: Not Significant
Trust Level → Project Management Success	12,051	0,000	H3: Significant
Trust Level → Collaboration Level → Project Management Success	0,303	0,762	H4: Not Significant

### Hypothesis 1

The direct effect test in Table 3 shows that the trust level variable has a significant effect on the level of collaboration with the T-statistic value showing a number of 31.770 which means more than the value of 1.96. Thus, hypothesis 1 can be accepted. The results of this test are consistent with research by Bond-Barnard et al., (2018); Buvik & Tvedt (2017); Bond-Barnard & Steyn (2015); Chiocchio et al., (2011).

### Hypothesis 2

The direct effect test in Table 3 shows that the level of collaboration variable does not significantly influence the success of project management with a T-statistic value of 0.304 which means no more than 1.96 and a P-value of 0.762, which means more than 0.05. so that hypothesis 2 is declared unacceptable. These results are inconsistent and different from research by Bond-Barnard et al., (2018); Buvik and Tvedt (2017); Dwivedula et al., (2016); Suprpto et al., (2015); Bond-Barnard & Steyn (2015); Chiocchio et al., (2011); Liu et al., (2011); Yang et al., (2011).

### Hypothesis 3

The direct effect test in Table 3 shows that the level of confidence variable has a significant effect on the success of project management with the T-statistic value of 12.051 which means more than the value of 1.96. Thus, hypothesis 3 can be accepted. These results are consistent from research by Jiang et al., (2016); Henderson et al., (2016); Rezvani et al., (2016); Bond-Barnard et al., (2013); Braun et al., (2013); Cheung et al., (2013); De Jong and Dirks (2012); Gundersen et al., (2012).

### Hypothesis 4

The indirect effect test in table 3 shows that the variable level of confidence in the success of project management through mediation, the level of collaboration does not have a significant effect, with the T-statistic value of 0.303 which means no more than 1.96 and the P-value of 0.762 which means more than 0.05 so that hypothesis 4 is declared unacceptable. These results are inconsistent and different from research by Bond-Barnard et al., (2018); Buvik and Tvedt (2017); Bond-Barnard & Steyn (2015); Chiochio et al., (2011).

### Results of the R Square Test

The coefficient of determination (R<sup>2</sup>) test is used to show the relationship between variables, in this study the independent variable and the dependent variable. The results in table 4 show that the level of collaboration has an R Square value of 0.561, which means that the level of trust affects the level of collaboration by 56.1%. Meanwhile, project management success has an R Square value of 0.615, which means that the level of trust has an effect on project management success by 61.5% and 38.5% is influenced by other factors not found in the research model.

**Table 4.** R Square Test

Variable	R Square	Percentage
Collaboration Level	0,561	56,1%
Project Management Success	0,615	61,5%

### Quality Index Test Results

The Quality Index is tested to determine the overall value of the research model. This test is done by calculating the GoF value with the formula  $GoF = \sqrt{((Comm) \bar{x} (R^2))}$ . The Comm value is obtained by calculating the average of the AVE, while the R<sup>2</sup> value is obtained by calculating the average R squared. The results of the calculation are as follows:

$$Comm = (0.574 + 0.533 + 0.517) / 3 = 0.541$$

$$R^2 = (0.615 + 0.561) / 2 = 0.588$$

Table 5 shows that the calculation result of the GoF value is 0.564, which according to Ghazali & Latan (2012) the figure is greater than 0.36, so it can be said that this research model is good because the greater the GoF value, the better the resulting model.

**Table 5.** Quality Index Test Results

Communality	R square	GoF	Conclusion
0,541	0,588	0,564	Large

### Conclusion and Recommendation

The researcher conducted this research with the intention of studying the effect of the level of trust as an independent variable on project management success as the dependent variable with the level of collaboration as the mediating variable. This research was conducted by distributing questionnaire sheets to five companies in the developer sector in Batam and filled out by each employee of these companies as many as 49-55 people per company. Respondent data collected for processing were 258 respondents. The results based on research by researchers are as follows:

1. The variable level of trust has a significant effect on the level of collaboration in developer companies in Batam. This explains that increased expectations, knowledge exchange, and trust which are part of the level of trust in a project team will increase the relationships, incentives, closeness, coordination, conflict, commitment that are part of the level of collaboration. The results of this study are consistent with previous research by Bond-Barnard et al., (2018).
2. The level of collaboration variable does not have a significant effect on project management success. If a project team increases the level of collaboration which includes relationships, incentives, closeness, coordination, conflict, and commitment, it will not affect the success of project management in terms of project performance or integration of science and innovation.
3. The trust level variable has a significant effect on project management success. Expectations, exchange of knowledge, and trust directly affect project performance and the integration of science and innovation in the successful management of a project at a developer company in Batam.

Recommendations from researchers based on the conclusions and limitations for further research are as follows:

1. It is recommended for researchers to directly distribute questionnaires to respondents so that the data obtained is more accurate and the questionnaires can be fully distributed again.
2. Researchers can distribute questionnaires on a wider scale, especially if possible outside Batam so that the data collected can provide more comprehensive and accurate results.
3. The next researcher can add several other variables such as leadership that has been previously studied by Braun et al., (2013); Gundersen et al., (2012); and Yang et al., (2011).

Recommendations from researchers based on the conclusions and limitations for developer companies are as follows:

1. Companies can apply trust in the scope of work in order to increase good collaboration in work relationships.
2. Companies can increase collaboration so that the chances of achieving project management success are greater.

## References

- Badan Pusat Statistik. (2020). Jumlah Penduduk Provinsi Kepulauan Riau 2016-2020. Diambil dari <https://kepri.bps.go.id/>
- Badan Pusat Statistik. (2020). Statistik Indonesia 2020. Jakarta: Badan Pusat Statistik.
- Bond-Barnard, T., & Steyn, H. (2015). Project management in developing countries: Implications for project trust, collaboration and success. 3rd IPMA Research Conference, (November), 1–23.
- Bond-barnard, T. J., Fletcher, L., Steyn, H., & Bond-barnard, T. J. (2018). Linking trust and collaboration in project teams to project management success. *International Journal of Managing Projects in Business*, 11(2), 432–457. <https://doi.org/10.1108/IJMPB-06-2017-0068>
- Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *Leadership Quarterly*, 24(1), 270–283. <https://doi.org/10.1016/j.leaqua.2012.11.006>
- Buvik, M. P., & Tvedt, S. D. (2017). The Influence of Project Commitment and Team Commitment on the Relationship between Trust and Knowledge Sharing in Project Teams. *Project Management Journal*, 48(2), 5–21. <https://doi.org/10.1177/875697281704800202>
- Cheung, S. O., Yiu, T. W., & Lam, M. C. (2013). Interweaving trust and communication with project performance. *Journal of Construction Engineering and Management*, 139(8), 941–950. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0000681](https://doi.org/10.1061/(ASCE)CO.1943-7862.0000681)
- Chiocchio, F., Forgues, D., Paradis, D., & Jordanova, I. (2011). Teamwork in Integrated Design Projects: Understanding the Effects of Trust, Conflict, and Collaboration. *Project Management Journal*, 42(6), 78–91. <https://doi.org/10.1002/pmj>
- De Jong, B. A., & Elfring, T. (2010). How does trust affect the performance of ongoing teams? the mediating role of reflexivity, monitoring, and effort. *Academy of Management Journal*, 53(3), 535–549. <https://doi.org/10.5465/amj.2010.51468649>
- De Jong, B. A., & Dirks, K. T. (2012). Beyond shared perceptions of trust and monitoring in teams: Implications of asymmetry and dissensus. *Journal of Applied Psychology*, 97(2), 391–406. <https://doi.org/10.1037/a0026483>
- Disnaker. (2019). Perusahaan Terdaftar di Dinas Tenaga Kerja dan Transmigrasi Provinsi Kepulauan Riau. Batam: Disnaker.
- Dwivedula, R., Bredillet, C. N., & Müller, R. (2016). Personality and work motivation as determinants of project success: the mediating role of organisational and professional commitment. *International Journal of Management Development*, 1(3), 229. <https://doi.org/10.1504/ijmd.2016.076553>
- GoWork Team, Pentingnya Teamwork dan Kolaborasi, 2018. Diambil pada 15 Juli 2020 dari <https://go-work.com/blog/pentingnya-teamwork-dan-kolaborasi>
- Gundersen, G., Hellesøy, B. T., & Raeder, S. (2012). Leading International Project Teams: The Effectiveness of Transformational Leadership in Dynamic Work Environments. *Journal of Leadership and Organizational Studies*, 19(1), 46–57. <https://doi.org/10.1177/1548051811429573>
- Henderson, L. S., Stackman, R. W., & Lindekilde, R. (2016). The centrality of communication norm alignment, role clarity, and trust in global project teams. *International Journal of Project Management*, 34(8), 1717–1730. <https://doi.org/10.1016/j.ijproman.2016.09.012>
- Ika, L. A., Diallo, A., & Thuillier, D. (2012). Critical success factors for World Bank projects: An empirical investigation. *International Journal of Project Management*, 30(1), 105–116. <https://doi.org/10.1016/j.ijproman.2011.03.005>
- Jingfeng Yuan, Chao Wang, Miroslaw, S., Asce, M., & Li, Q. (2012). Safety-Knowledge Management in American Construction Organizations: Questionnaire Survey and Analysis. *American Society of Civil Engineers*, 28(April), 252–264. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479](https://doi.org/10.1061/(ASCE)ME.1943-5479)
- Lee, P., Gillespie, N., Mann, L., & Wearing, A. (2010). Leadership and trust: Their effect on knowledge sharing and team performance. *Management Learning*, 41(4), 473–491.

- <https://doi.org/10.1177/1350507610362036>
- Liu, Y., Keller, R. T., & Shih, H. A. (2011). The impact of team-member exchange, differentiation, team commitment, and knowledge sharing on R&D project team performance. *R and D Management*, 41(3), 274–287. <https://doi.org/10.1111/j.1467-9310.2011.00636.x>
- Mckay, K. "Trust, don't Track" and other tips to run a successful virtual office, 2020. Diambil pada 15 Juli 2020 dari <https://www.smartcompany.com.au/business-advice/tips-run-successful-virtual-office/>
- Meng, X. (2012). The effect of relationship management on project performance in construction. *International Journal of Project Management*, 30(2), 188–198. <https://doi.org/10.1016/j.ijproman.2011.04.002>
- Rezvani, A., Chang, A., Wiewiora, A., Ashkanasy, N. M., Jordan, P. J., & Zolin, R. (2016). Manager emotional intelligence and project success: The mediating role of job satisfaction and trust. *International Journal of Project Management*, 34(7), 1112–1122. <https://doi.org/10.1016/j.ijproman.2016.05.012>
- Sianturi, R. Proyek dimulai Maret 2020, Ini Deretan Program Pengembangan Pelabuhan Batu Ampar Batam, 2020. Diambil pada 20 Juli 2020 dari <https://batam.tribunnews.com/2020/02/12/proyek-dimulai-maret-2020-ini-deretan-program-pengembangan-pelabuhan-batu-ampar-batam?page=2>
- Suprpto, M., Bakker, H. L. M., & Mooi, H. G. (2015). Relational factors in owner-contractor collaboration: The mediating role of teamworking. *International Journal of Project Management*, 33(6), 1347–1363. <https://doi.org/10.1016/j.ijproman.2015.03.015>
- Yang, L. R., Huang, C. F., & Wu, K. S. (2011). The association among project manager's leadership style, teamwork and project success. *International Journal of Project Management*, 29(3), 258–267. <https://doi.org/10.1016/j.ijproman.2010.03.006>