



Factors Determining Strategic Alliance Success in Construction Joint Operation Lrt Project

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ABSTRACT. *The study was conducted on the first LRT project located in a large city, which serves major urban lines in an area, due to lack of experience, as a contracting company for development decided to conduct joint operations with an experienced railroad company. This strategic alliance pattern is categorized as Joint Operation or Joint Operation, where both parties agree to dissolve the alliance after the project is completed. The purpose of this research is to identify the factors that determine the success of the alliance, and to develop a model of success of the alliance in the LRT Project, as well as to build strategic steps for its implementation in the future. To determine the factors that influence the success of the alliance, a quantitative approach is used, with the questionnaire being the research instrument. The analysis technique used in this study is factor analysis and regression analysis. The analysis shows that there is a view factor that influences the success of the alliance in the LRT Project. By paying attention to the factors that have been obtained, the company, or other similar project alliances in the future can increase the success rate of strategic alliances.*

Keywords: *strategic alliance, alliance success, factor analysis, evaluation model*

I. INTRODUCTION.

1.1. Background

The condition of Indonesia, where the construction industry is growing rapidly and experiencing an increase in investment that is very growing in the field of infrastructure. The city as an urban area is a center of activity for people who live and have activities in their daily lives as well as for people who live in the surrounding area who support or are directly or indirectly involved in the socio-economic activities of the urban area.

The problem of transportation is increasingly attractive not only to observers of social problems, but also to increasing political attention. The city is expected to experience total traffic congestion in 2020 without much progress in transportation. At present the local government is working to establish LRT (Light Rail Transit) in a strategic alliance with several railroad construction companies, by developing joint operating partnership concepts.

1.2. Problem Statement

As mentioned above, the organization deals mainly with the production of precast concrete. Never before has the company done this kind of project. Increasing its capacity and ensuring the quality of the delivery of project results, WTON management decided to forge a strategic alliance with Emrail, Sdn., Bhd. It was hoped that this development of the alliance generated other valuable creations in the construction of trackwork in the LRT project. Inaccurate completion of a project will affect the next project that follows up, including this LRT project. The impact of late completion of the project will significantly affect the overall condition of the resource and be difficult to control. Needless to say, it is a common experience that the projects exceeded the initial budget and were not completed on time.

1.3. Problem Questions

From the problems that have been submitted next can be raised several problem questions as follows:

RQ 1: What factors influence success in the LRT project work alliance

RQ 2: What is the success model in the LRT project work alliance

RQ 3: How to implement a success strategy in the LRT project alliance

1.4. Research Objectives

From the question the problems that have been formed can then be followed up with several research objectives as follows:

1. Look for factors that influence success in the LRT project work alliance
2. Build a success model in the LRT project development work alliance
3. developing and proposing alternative strategies for success in the LRT project work alliance

II. LITERATURE REVIEW.

2.1. Conceptual Theory

A group of activities commitment to a particular product, service, or outcome to be achieved,

Manuscript published on November 30, 2019.

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at the end of the completion of a project and the project is temporary which must be completed on time in accordance with the set targets. Project completion can end normally or termination of the project for evaluation in the future if it turns out the project is not completed or is running abnormally. While understanding Project management is a way of applying learning, talents, tools, and procedures to design activities in meeting project requirements. Project management is carried out to implement and realize the results of project management planning in the completion and achievement of the objective targets of a project. Project management helps empower all organizational resources for success in completing projects efficiently and effectively (PMBOK).

2.2. Strategic Management

Strategy is defined as the pattern of the responses of an organization to its environment within the business context [1]. The strategy can also help organizations address various work areas such as marketing, finance, production, research and development, and public relations [2]

2.3. Strategic Alliance Concept

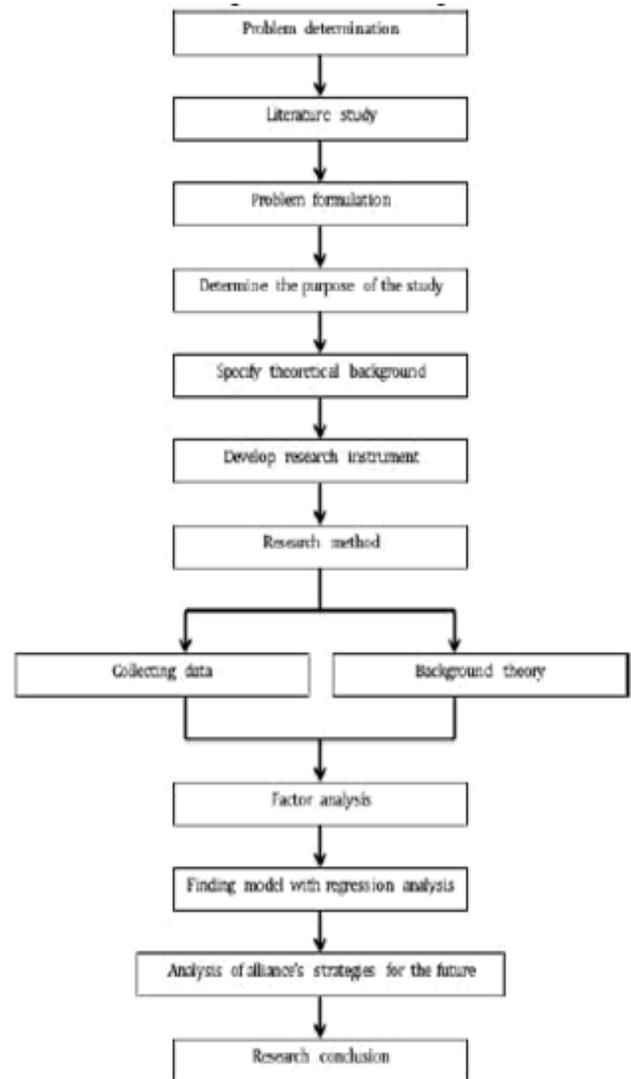
The Alliance Strategy is often used as a strategic tool for competition, because this strategy provides various adaptive access to resources that are not owned by the company. [3] mentions the existence and various approaches to defining terms in strategic alliances, such as those used in settings for different situations. Strategic alliances can also be represented as cooperative relations agreements between two or more organizational entities that are independent of each other, there is no relationship involved in informal contracts. Strategic alliance, as shown in the previous explanation, is a form of cooperation with two or more organizations that share resources and activities to achieve common goals [4]. The combination of activities and resources results in new sources being achieved to become a competitive advantage and allergy synergy for collaborating organizations. The impact will bring up the fact that the partnership effort will benefit both and is an important factor in forming a strategic alliance.

2.4. Strategic Alliance Critical Success Factor

In order to be successful, each project is carried out determinantly. It is important to be able to measure the extent to which this has been achieved, regardless of the definition given to success or performance. [5], conducted a study on key alliance success indicators. Identifying success factors in strategic alliances is one of important management research topics. Franco believed that the success of a strategic alliance depends on the achievement of the objectives set in the early stages of the relationship. [6] discussed three prominent theoretical approaches to explaining alliance success, which rely on resources, competences, and relational factors.

III. METHODOLOGY

3.1. Research Design



3.2. data collection methods used

Data collection methods in this study were carried out through stages:

1. Collecting data through a questionnaire with one hundred and one respondents who are employees involved in the ongoing LRT Project.
2. Data processing of the results of the questionnaire by factor analysis to obtain influential factors.
3. Building models based on factor findings to describe current conditions, so that later they can be used to simulate model behavior in the future

3.3. Research Instrument Development

The research includes interviews and a tool, supported by a questionnaire, to evaluate the internal culture. In order to obtain quantitative information, the closed questions are contrary, structured and well made.

1. The factors listed below are "Key indicators of alliance success" as derived from [5].

- a. Function
 - 1. Compatibility - Perception (str1)
 - 2. Compatibility - Contribution (str2)
 - 3. Partner selection - Previous experiences (pse1)
 - 4. Partner selection - Characters (pse2)
 - 5. Partner selection - Management styles (pse3)
 - 6. Government policies (gpo1)
- b. Process
 - 1. Trust and commitment (pro1)
 - 2. Sense of belonging (pro2)
 - 3. Recruitment process (rec1)
 - 4. Reward achievement (rec2)
 - 5. Relationship Environment (rec3)
 - 6. Power (rec4)
 - 7. Firm size (rec5)
 - 8. Culture compatibility (rec6)
 - 9. Nationality (rec7)

The factors listed below are " Theoretical approach in defining alliance success " as derived from

- 1. Resource contribution (res1)
 - 2. Financial resources (res2)
 - 3. New resources (res3)
 - 4. Knowledge (res4)
 - 5. Partner sharing in knowledge (com1)
 - 6. Technologies (com2)
 - 7. Equipments (com3)
 - 8. Operating procedures (com4)
 - 9. Managerial competence (com5)
 - 10. Knowledge management (com6)
 - 11. Relational exchange (rel1)
2. Dependent variable (Y) is a variable influenced by independent variables. The alliance's success is the data becoming the Y variable.

3.4. Processed Data Using Factor Analysis

The steps to be performed in the factor analysis are:

- 1. Reliability test
- 2. Validity Test
- 3. Anti-Image Matrices Test
- 4. Factors Extraction
- 5. Regression

IV. RESULT AND DISCUSSION

4.1. Descriptions of the Data

The questionnaires were distributed directly to all the employees in that company, and also to the Board of Management to gain their understandings and perceive towards the company's alliance agreement. From the feedback, author got 101 filled questionnaires

4.2. Discussions

4.2.1. Reliability Test

Based on reliability test, the Cronbach's Alpha score for the data is 0.762. According to Ghazali (2016), if the Cronbach's Alpha score is more than 0.7, the measurement

tool could be categorized as reliable, and could be used in further analysis.

4.2.2. Validity Test

Based on SPSS calculations, the result of KMO test is 0.760. The KMO value needed is ≥ 0.5 . As for the Barlett's test, the value obtained is $0,000 < 0,001$. So that from the calculation results we can conclude that the data collected was sufficient for factor analysis. Then the next analysis is using Anti Image Matrices to select appropriate indicators. The results of the analysis stated that there are eight indicators that have values below 0.5 so that the Anti Image Matrices was recalculated by removing the indicator with the smallest value. The 18 indicators with value > 0.5 are: pro1, pro3, pro4, pro5, pro6, pro7, pro8, pro9, res1, res2, res3, res4, com1, com2, com3, com4, com5, com6.

4.2.3. Factor Extraction

The total variance explained uses the principal componen analysis method as many as six factors, then the six factors are rotated using the varimax factor rotation method. In order to obtain more optimal results, author performed again a factor reduction analysis and reduced it to become five variance explained. Based on the results of the analysis, there we five factors explained, then the five factors were rotated using the varimax factor rotation method.

From the results of calculations with SPSS, it was found that indicators filled in factor 1 was two, then the second factor filled with four indicators, the third factor filled with four indicators, and the fourth factor filled with three indicators, and the fifth factor filled with one indicator. All of these indicators can be grouped and interpreted as new factors as follows:

Factors	Indicators
Leadership in alliance	Relationship (pro5) Managerial competence (com5)
Enhancement of working method	Resource contribution (res1) Knowledge management (com6) Equipments (com3) Operating procedures (com4)
Unavailability of resource management	Firm size (pro7) Financial resources (res2) New resources (res3) Technologies (com2)
Diversity as competitive advantage	Knowledge (res4) Nationality (pro9) Power (pro6)
Trust implication	Trust and commitment (pro1)

4.3. Model Development Analysis for Strategic Alliance Success in LRT J

After finding the new influencing factors, the analysis was done using regression to get a model that is able to describe strategic alliance success.

$$Y = 5.277 + 0.057 X_1 + 0.483 X_2 - 0.193 X_3 + 0.438 X_4 - 0.141 X_5$$

With the following conditions:

$$\begin{aligned}
 & -2.775 \leq X_1 \\
 & \leq 1.771, \\
 & -2.356 \leq X_2 \\
 & \leq 1.730, \\
 & -2.622 \leq X_3 \\
 & \leq 1.927, \\
 & -2.454 \leq X_4 \\
 & \leq 2.135, \\
 & -2.309 \leq X_5 \\
 & \leq 3.095.
 \end{aligned}$$

Where:

Y = Alliance success

X₁ = Leadership in alliance

X₂ = Enhancement of working methods

X₃ = Resource management

X₄ = Diversity as competitive advantage

X₅ = TRUST IMPLICATIONS

4.4. Analysis of Strategy Implementation for Alliance Success in LRT Project Phase I

4.4.1. Leadership in Alliance

WBE alliance should stresses upon building an environment in which each and every employee develops and excels. Managers should influence the group's efforts to achieve the goals and drive them. This influence can be derived from formal sources such as that provided by alliance acquisition of managerial position.

4.4.2. Enhancement of Working Method

In project, timing is vital because of the fast paced nature of the project environment. Alliance should take action to enhance the working method to keep the daily operation effective and efficient in order to ensure that the alliance achieves its goal on time. Each partner's resource contribution is needed. WBE should maximizing the utilization of the resources available to enhance the working method in order to complete the project on schedule, also gaining knowledge from partners and developing competencies with adequate suitability of the resources.

4.4.3. Unavailability of Resources Management

WBE resource management should include a comprehensive and detailed lists of all the resources needed to complete the project. WBE should also be careful not to rely on a particular resources or resources group for the project, in the sense that relying on a particular subset of resources could lead to workload bottleneck and resource shortage. In addition, WBE could match the workforce with its workload as well.

4.4.4. Diversity as Competitive Advantage

Employing a diverse workforce requires WBE to create a company culture that respects divergent views. To avoid tension between employees, WBE must create a culture that promotes dignity and respect. Furthermore, communication can be adversely affected if the first or second languages of the employees are totally different.

4.4.5. Trust Implication

Relationship capital should include the interaction between partners that facilitates and enables the alliance to function effectively on a daily basis, as well as having alliance

partners to invest in time and effort to build positive feelings and interactions.

V. CONCLUSION.

Factors affecting alliance success: Leadership in alliance, Enhancement of working method, Unavailability of resource management, Diversity as competitive advantage, and Trust implication. The relationship between dependent and independent variables illustrated in the following model:

$$Y = 5.277 + 0.057 X_1 + 0.483 X_2 - 0.193 X_3 + 0.438 X_4 - 0.141 X_5$$

Based on the result, we can conclude that the alliance could achieve its success to the value of 7.98. But if alliance do not concern about the affecting factors, so the success rate could decrease to 2.098. Alliance is expected to take steps to achieve the optimum value for each factor.

For the construction company who wants to establish a strategic alliance, it would be useful to identify alliance success factors to achieve better performance. Intense competition in the construction industry must forcing companies to examine different ways by which they could enhance or retain their competitive edge. Strategic alliance should reinforce core strength and joint knowledge relocating the resources of the partners by contributing to high receptivity, collaboration, and collective learning. In developing alliance in particular, alliance success lies on successful management of key factors, for example as analyzed in this study; leadership in alliance, enhancement of working method, unavailability of resource management, diversity as competitive advantage, and trust implications. Moreover, there is evidence that the majority of alliances do not use rigorous performance metrics (Bamford and Ernst, 2002). Therefore, it would be useful to establish whether or not formal measurement of alliance performance was positively correlated with perceived alliance success.

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