The Influence of Stakeholder Factors Affecting the Success of Construction Projects In Indonesia

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Abstract. This study was conducted to determine the influence of the factors of stakeholders affecting the success of the project from designers, contractors, supervision consultants, clients, government development projects. To complete projects that successfully meet the needs and expectations of clients and other stakeholders. Many researchers focus only on the internal of contractors and often the common goals are not achieved. In project management practices, contractors, designer consultants, supervisory consultants and project owners/clients are kept in touch and coordinate each other in the course of construction projects. The purpose of this study is to confirm the factors that have a positive and significant impact on the success of the project with the ultimate goal on criteria such as quality, cost, time, health and safety of the HSE environment and the satisfaction of the stakeholder. The model was validated through a survey returning 101 completed questionnaires with Generalized Structured Component Analysis (GSCA-SEM) as the method of analysis.

1. Introduction

According to a study by Esteves (2004), the critical success factors (CSF) approach has been established and popularized over the last 30 years by a number of researchers [1]. The concept of success factors developed by D. Ronald Daniel of McKinsey and Company in 1961. Then develop back into critical success factors (CSFs) by John F. Rockart between 1979-1981. After that the concept is widely used in various industrial fields including project [2]. Critical success factors (CSFs) are used to support and measure the success of a strategic and tactical approach to project execution with the intent of ensuring the success of the project [3]. According to the old view, a project is successful if completed on time, within budget and good quality. It also provides a high customer satisfaction[4]. One trend in the construction industry is a growing emphasis on project management. However, project management as pursued by most construction companies is related only to fields such as document management and knowledge communities. Ineffective integration of project management with enterprise operational processes prevents synergistic effects and causes resource waste and reduced operational efficiency. These failures have increased enterprise burdens and have prevented companies from enhancing their competitiveness. Construction engineers and personnel have widely varying understanding of project management knowledge practice [5]. First, a
hypothetical research model was constructed by reviewing the relevant literature. Construction industry project personnel in Indonesia were then surveyed regarding the application of project management TTS (techniques, tools, and skills) and their impact on project outcomes in terms of performance in project participation, the frequency of project success. Structural equation modeling (SEM) was then performed to identify the management techniques with the greatest impact on performance, owner satisfaction, and project success. The objective was to use the empirical findings to provide a reference for practitioners when allocating and prioritizing management techniques that should be used in modern construction projects [5].

Indonesian government projects there are several stakeholders involved in a construction project that is on the initial stage of the project is the planning and design there are two stakeholders involved that the project owner, designer. While at the construction stage there are three stakeholders involved that the project owners, contractors and Supervision. The called stakeholders consultants can be divided into two, namely planning consultant/designer and supervising consultants [6].

Problem Investigated In Indonesia: (1) The main issue of contract implementation while facing the end of year, specifically for single year contract is that its execution shall not exceed the budget year. Owner auctions construction project without observing the remaining time, whether the contractor is capable to complete the project. As the consequence, many contractors are unable to complete the existing period [7]; (2) The advanced payment process also requires time; many requirements must be met, for example advanced payment bond and quite complex bureaucracy, which make the contractor to be not willing in taking advanced payment [7]; (3) The main factor causing lateness in the execution of building construction is the unavailability of manpower, due to planting and harvesting seasons [8]; (4) Most of the manpower working in NTT has low level of education [9].

2. Methodology

On the basis of the literature sources and theoretical achievements we can conclude that there is a very close link between the type and scope of projects and respective Critical Success Factors (CSFs) for Indonesian Government project. Government projects there are several parties involved in a construction project that is on the initial stage of the project is the planning and design there are two parties involved that the project owner, party designer. While at the construction stage there are three parties involved that the project clients, contractors and the Supervisions Consultant [6,10]. In the Figure 1 below is a conceptual model and the critical success factors for project success Indonesian Government Project.

![Conceptual model of critical success factors and project success for Indonesian Government Project](image)
There are a wide range of definitions of the term “Success”. Success is perceived differently by different stakeholders. It plays out in various ways across states, communities, and population subgroups since there is a large diversity of people with different ideas. In fact, the definition of success is so broad that its meaning differs from one specific branch of science to another. Thus, success is not easily defined or determined. As suggested by Meredith and Mantel what appears to be a failure in one project might be a success factor in another one [11]. The intense competition in the construction industry is currently making a success contractors survive in the industry is determined by the ability of the contractor to deal with uncertainty, cost, quality and time, satisfaction, safety and health and environmental impacts [12,13,14,15,16,17]. Project success factors, are the set of circumstances, facts, or elements which, when influenced, increase the likelihood of success[18]. Success factors contribute to the success or failure of a project, but do not form the basis of the judgement. Success factors are the independent variables that make success more likely. Success factors answer the question: what are the few key things that must go right for a project to be successful [19]. The stakeholder involved in the project, including project managers, owners, contractors, consultants, subcontractors, suppliers. The influence of the owners and representatives of the owners is regarded as a significant factor on the performance of construction time. Factors related to the owners concerned with the characteristics of the owner, the owner and the type of experience, knowledge organization construction projects, project financing, trust the owner of the construction team, sophisticated construction, well-defined scope, risk aversion, project management [20,21,22]. Obstacle to effective client–contractor working relationships is a failure to agree on measures of success and a failure by the client to consider the needs of stakeholders [23]. The main contractor and subcontractor begin their primary task when the project reaches the construction phase. These factors include experience of the contractor, in the field of management, supervision and the involvement of subcontracting, the contractors’ cash flow, cost control system effectiveness and speed of information flow [20,22]. Competence contractors become an important part of which the competence of the project manager has been identified as the most important factor for the successful realization of the project. Technical skills and managerial administration of the project, as well as the commitment and competence, be the most important component through out the project lifecycle [24,25]. Errors in design documents is a risk that has a high enough interest rate, which is thought to cause many changes and rework on the construction project. It also gives effect to delay construction projects. Planning Consultant can pour or ideas from the owners to the working drawings and calculations or estimates occur at the design stage. The design and planning of an early stage is very large and significant impact on the success of a project, because most of the decisions and project financing strategy relies on project planning. Designer have a role in decision making and as a translator of the owner's needs and direction for implementing. The idea and the idea of the owners put forth in a planning document that consists of specifications and drawings to be carried out by contractors [26,27,41]. Six aspects of influence in general to increase or decrease the Supervision Consultant performance road and bridge project in North Sulawesi; aspect quality, cost aspect, aspect personnel qualification and reporting aspects have a significant impact in particular to the increase or decrease in performance consultants [28]. Based on the description above, the study is expected to be able to answer any factor of four factors that are considered critical to the success of a construction project within the government.
Figure 2. The Conceptual Framework Stakeholders Factors That Influence The Success Of The Government Building Construction Projects

In this research, the samples shall be project owner, supervision consultant and contractor working on and completing the building construction work in Nusa Tenggara Timur – Indonesia in 2015 and 2016. The data obtained is primary data, namely a data collection method which is directly related with respondent without going through intermediaries or other tools. The tools used in the data collection are questionnaire and interview. The respondents have been asked to fill in a set of questionnaires specifically developed for the purposes of the study. Questionnaire for project success measurement – contains statements organized by 15 items; 5-rank Likert scale has been used for capturing the opinion of respondents on the formulated questions. Research variables are basically anything in any form stipulated by the researcher to be studied that information concerning the matter is obtained, to be taken conclusion. Therefore it can be stated that research variables are anything formed as attribute or object used by researcher to be researched and taken conclusion of (Sugiyono, 2014). The variables being researched in this research are contractor, owner, designer and supervision consultants and project success.

The Structural Equation Modeling (SEM) is the correct analysis tool to simultaneously test the multiple exogenous and endogenous of the variables with multiple indicators. Among the Structural Equation Modeling (SEM) techniques, the one that is known the most is the Covariance-Based SEM which is represented by software such as AMOS, EQS, LISREL, MPlus and the likes. In reality, for social science researchers, the CB-SEM procedure demands numerous requirements which are difficult to meet. As the alternative, the Generalized Structured Component Analysis (GSCA) offers capability to researchers for SEM analysis. GSCA is the analysis of 3rd generation Structural Equation Modeling which is developed by Heungsun Hwang, Hec Montreal and Yhoshio Takane in 2004. The objective is to substitute factor with linier combination of the indicator (manifest variable) in the SEM analysis. This analysis approach uses the smallest square method (least square) in the parameter assumption process. GSCA is developed to avoid lack of PLS (Partial Least Square), which is
equipped by global optimization procedures such as the procedures in SEM and also by maintaining the local optimization procedures (as in PLS) that it shall be powerful for theoretical confirmation.

### Table 1. Hypotheses

| Hypotheses | Hypotheses Statement | Resolution |
|------------|----------------------|------------|
| $H_0$      | It is assumed that owner relatedness has significant influence to project success | If $CR > 1.96$ or probability ($p$) $< 0.05$ the hypotheses shall be accepted |
| $H_0$      | It is assumed that contractor relatedness has significant influence to project success | If $CR > 1.96$ or probability ($p$) $< 0.05$ the hypotheses shall be accepted |
| $H_0$      | It is assumed that planning consultant relatedness has significant influence to project success | If $CR > 1.96$ or probability ($p$) $< 0.05$ the hypotheses shall be accepted |
| $H_0$      | It is assumed that supervision consultant relatedness has significant influence to project success | If $CR > 1.96$ or probability ($p$) $< 0.05$ the hypotheses shall be accepted |

The GSCA method can also be implemented in complex inter-variable relation (can be recursive and reciprocal), involving component higher-order (factor) and multi-group comparison. Tenenhaus (2008) states that GSCA is component-based SEM new method, highly important and can be used for score calculation (not scale) and can also be implemented on a very small sample. Moreover, GSCA can also be used on structural model involving variables with reflexive and/or formative indicators. Singularity and multicollinearity issues often become serious obstacles in structural model analysis using covariant-based SEM. Hwang (2009) states that in practice, GSCA allows multicollinearity, namely there is strong correlation between exogenous variables. The structural model which is specified correctly (theory-based and research results) shall be better to be analyzed by covariant-based SEM (for example by AMOS or LISREL softwares). On the other side, in terms of the model is specified incorrectly (theoretical basis or research result is not existed) the component-based SEM analysis shall be to be used and more recommended. Component-based SEM analysis or GSCA is a better alternative compared to PLS, namely having better recovery parameter (Hwang, et.al., 2010). However, GSCA can also be implemented in structural model which has strong basis of theory, or in other words as confirmatory analysis method. Whereas the reasons becoming the background of SEM-GSCA method selection in this research shall be as follows: (1) The model formed in this research’s conceptual frame, there is tiered causal relation namely the supply chain management (SCM) integrative implementation and supply chain flexibility which influence competitive superiority and furthermore influence project performance. With the many and tiered relations, the issues and objective to achieve may only be settled with the help of structural-shaped model; (2) GSCA is an analysis tool suitable to conduct model development simulation with the criteria of the correct model selection by using the largest goodness of fit (AFIT); (3) This study uses latent variable which is measured through indicators. GSCA is suitable to be used to confirm the unidimensionality of the various latent variable indicators, whether reflexive or formative; (4) GSCA is a powerful analysis method which is not based on the many assumptions and made possible to conduct analysis of the various latent variables simultaneously which gives efficiency statistically; (5) GSCA method is easier to operate and the specification of reflexive and formative indicator model. This is because GSCA does not require certain distribution assumption and does not required index modification. Referring to the reasons of GSCA model selection, the researcher realizes that in the utilization of this method there are some assumptions becoming the basis of its utilization. GSCA assumption only relates with structural modeling, and is not related with hypotheses testing, namely: (1) relation between latent variables is linear and additive, linearity testing can be conducted by SPSS software through test/curve fit Ramsey
approach, and (2) sample size in GSCA which is based on resampling (bootstrapping) shall not require large sample and can use non-probability sampling technique. Research empirical model testing by GSCA method can be conducted as follows: (1) GSCA Model Measure of Fit Evaluation, Measure of fit GSCA analysis which can be conducted on measurement model, structural model and overall model means the combined goodness of fit measure between measurement model and structural model, specifically on reflective indicators; (2) Measurement Model Evaluation. In this research the entire latent variables are measured by reflective indicators, therefore evaluation towards measurement model can be conducted as follows: (2.1) Latent construction is rated as having convergent validity, in terms of the loading estimation is larger than 0.70 and critical ratio (CR) rate is significant on trust level of 95% or α = 0.05; (2.2) GSCA method discriminant validity testing by observing the AVE (Average Variance Extracted).

| Variable          | Indicator/Item                                      | Reference                                      |
|-------------------|-----------------------------------------------------|------------------------------------------------|
| Contractor (X₁)   | X₁,1: Top Management Support                       | 1. Lévin & Pinto, (1986) [29]                  |
|                   | X₁,2: Project Team                                  | 2. Otunde & Yusuf, (2015) [30]                 |
|                   | X₁,3: Project Scope                                 | 3. Belche et al, (2015) [31]                   |
|                   | X₁,4: Availability of resources                     | 4. Moedhi & Morone, (2015) [32]                |
|                   | X₁,5: Project Control                               | 5. Ahsan, et al, (2014) [33]                   |
|                   | X₁,6: Change Order                                  | 6. Ofori, (2013) [34]                         |
|                   |                                                     | 7. Elsaboni et al, (2009) [35]                 |
|                   |                                                     | 8. Lester, (2007) [36]                        |
|                   |                                                     | 9. Cleland & Gareis, (2006) [37]              |
|                   |                                                     | 10. Phua, (2004) [38]                         |
|                   |                                                     | 11. Iyer & Jia, (2005) [39]                   |
|                   |                                                     | 12. Ghasabeh, (2009) [40]                     |
| Owner (X₂)        | X₂,1: Payment Of Completed Work                     | 1. Atout, (2016) [41]                         |
|                   | X₂,2: Slow Decision Making                          | 2. Moedhi & Morone, (2015) [32]                |
|                   | X₂,3: Unrealistically imposed contract duration      | 3. Hwang & Lim, (2013) [42]                   |
|                   |                                                     | 4. Koelman, (2004) [43]                       |
| Designer (X₃)     | X₃,1: Completion of Contract Document               | 1. Wala, (2013) [44]                          |
|                   | X₃,2: Quality design                                | 2. Diputra, I. G.A (2009) [45]                 |
|                   | X₃,3: Price Compliance                             | 3. Darmawan & Rahmad (2008) [46]              |
| Supervision (X₄)  | X₄,1: Technical Capability                         | 1. Kaming dan Riano, (2013) [47]              |
|                   | X₄,2: Experience                                    | 2. Irawadi, (2015) [48]                      |
|                   | X₄,3: Sufficiency of Human Resources                | 3. Khosraavi & Afshari (2011) [15]            |
| Success (Y)       | Y₁,1: Cost                                         | 4. Elsaboni et al, (2009) [35]                 |
|                   | Y₁,2: Time                                         | 5. Nguyen et al, (2004) [49]                  |
|                   | Y₁,3: Quality                                      | 6. Westerveld, (2003) [50]                    |
|                   | Y₁,4: Stakeholders Satisfaction.                   | 7. Cooke-Davies, (2002) [51]                  |
|                   | Y₁,5: HSE                                          | 8. White & Fortune, (2002) [52]               |

It is recommended that AVE rate is higher than 0.50 AVE rate of higher than 0.50 means that the latent variables have good discriminant validity; (2.3) Latent variables have good composite reliability.
in terms of the composite reliability rate is higher than or equal to 0.70 (Solimun, 2010 and Imam Ghazali, 2008); (3) Goodness-of-fit Evaluation on Structural Model and Overall Model; The measure of fit evaluation on structural model and overall model means the goodness of fit measurement, namely the combination of measurement model and structural model with FIT, AFIT, GFI and SRMS testing; (3.1) Measure of fit of the structural model is measured by using FIT and AFIT; (3.1a) FIT shows the total variables of the entire variables which can be explained by structural model. The higher FIT rate, the larger the variable variant proportion which can be explained by model; (3.1b) AFIT (Adjusted FIT) can be used for model comparison. In model with AFIT the rate can be observed between better models; (3.2) Measure of fit Overall Model, which is observing structural model and measurement model in an integrated manner in the entire model. The goodness-of-fit examination of overall model is to observe SRMS score by cut-off ≤ 0.08 and GFI score with cut-off ≤ 0.90; (3.4) Structural Model Testing and Research Hypotheses. Hypotheses testing (β, λ, γ) is conducted by bootstrap resampling method which is developed by Geisser and Stone (Solimun, 2012). The test statistics used is the critical ratio (CR) equal to t test. The implementation of resampling method makes possible to free-distributed data which does not require normal distribution assumption, and does not require large sample (minimum 30). Bootstrap sample is suggested to reach 500, because with the number of bootstrap sample it can produce stable parameter assumption. Meanwhile the amount of sample on each bootstrap is suggested to be larger than its original sample. Hypotheses testing in this research is aimed to answer whether the submitted hypotheses is accepted or rejected. The testing is conducted with critical ratio (CR), p value ≤ 0.05 (α = 0.05) which means the parameter estimation signification rate in hypotheses testing is stipulated as 95% or α = 0.05.

3. Result and Discussion
Based on the results of data collection or questionnaire answers obtained from the respondents obtained a description of the characteristics of respondents from the main actors of the project include project owners, supervision consultants and contractors, against the criteria of the success of building construction projects that include education levels, group work experience, interest groups, As shown in the following table 3

| Table 3. Characteristics of Respondents |
|----------------------------------------|
| **No** | **Characteristics of Respondents** | **frequency** | **Percentage (%)** |
| 1 | **Education groups** | | |
| | Below Bachelor’s Degree | 18 | 17.31 |
| | Bachelor | 78 | 75.00 |
| | Master | 5 | 4.81 |
| | Doctors | 3 | 2.88 |
| | **Total** | 104 | 100 |
| 2 | **Work Experience Group** | | |
| | < 10 Years | 47 | 45.19 |
| | ≥ 10 Years | 17 | 16.35 |
| | ≥ 15 Years | 40 | 38.46 |
| | **Total** | 104 | 100 |
| 3 | **Stakeholders Group** | | |
| | Contractors | 35 | 33.65 |
| | Owners/Clients | 35 | 33.65 |
| | Consultant supervision | 34 | 32.70 |
| | **Total** | 104 | 100 |

The first phase of this goodness of fit test is aimed to generally evaluate the goodness of fit (GOF) between the data and the model. Structural equation does not have the best statistic test which may explain the power of model prediction. As the substitute, several GOF or Goodness of Fit Indices
(GOFI) measures can be used together or in combination. None of the GOF or GOFI measures can exclusively be used as the basis of goodness of fit evaluation of the entire models. The best clue in assessing model goodness of fit is a strong substantive theory. If the model only shows or represents not quite strong substantive theory, and although the model has good model fit, it shall be quite difficult for us to assess the model. The goodness of fit test of the entire models is related with analysis towards statistic GOF produced by the program, in this matter the GSCA. By using GOF measure guidelines and the results of statistic GOF, the goodness of fit analysis of the entire model can be conducted as observed in Table 3 Results of Goodness of Fit Index (Inner Model), as follows:

Table 4. Goodness of fit Index (Inner Model)

| Goodness of fit Index | Cut of Value | Result | Information   |
|-----------------------|--------------|--------|---------------|
| FIT                   | > 0.500      | 0.598  | Model good fit|
| AFIT                  | > 0.500      | 0.589  | Model good fit|
| GFI                   | > 0.900      | 0.995  | Model good fit|
| SRMR                  | < 0.080      | 0.434  | Model Poor fit|

a. FIT = 0.598; FIT shows the total variant of the entire variables which can be explained by certain models. FIT score ranges from 0 to 1. Therefore the model formed can explained the entire existing variables of 0.598. The exogenous variable can be explained by model is 59.8% and the remaining amount (40.2%) can be explained by the other variables. It means that the model is to explain the studied phenomenon.

b. AFIT = 0.598; Adjusted of FIT is almost equal to FIT. However, because of there are more than one exogenous variable influencing the endogenous variable, it shall be better if the interpretation on model goodness of fit uses the corrected FIT or uses AFIT. Because there are even more influencing variables, the FIT score shall be larger because the proportion of variety shall also increase therefore in order to adjust to the existing variable it can use the corrected FIT. If it is observed from AFIT score, namely 0.589, the model to be explained by model is 58.9% and the remaining (41.1%) can be explained by the other variables.

c. Goodness of Fit Indices (GFI) = 0.995; Goodness of Fit Indices (GFI) is a measurement on the model goodness of fit in producing observed covariant matrix. This GFI score must range from 0 to 1. Although theoretically GFI may have negative score, it shall not occur because the model having negative score is the worst model. GFI score which is larger than or equal to 0.9 (0.995 > 0.900) shows a goodness of fit of a model (Diamanto Paulus, 2000 in Ghozali, 2005).

d. Standardized Root Mean Square Residual (SRMR) = 0.434; Standardized Root Mean Square Residual (SRMR) represents mean score of the entire standardized residuals and ranges from 0 to 1. Model having goodness of fit shall have smaller SMSR score than 0.08. The submitted model in this research shall have 0.434 SRMR score because SRMR score is larger than 0.08 (0.434 > 0.08), therefore it can be concluded that the model is declared as poor fit.

Outer model/measurement model is a model with calculation result based on calculation using GSCA program. The method used is the Confirmatory Factor Analysis, where by using the tool we can observe that the existing indicators can truly explain a construction. The objective of measurement model is to describe how good are the indicators in this research to be used as latent variable measurement instrument. Evaluation towards the validity of measurement model can be conducted by observing the estimation result of the factor contents. A variable is said to have good validity towards its construction or latent variable if the factor content t-score is larger than the critical ratio (≥ 1.96) and/or its standard factor content is ≥ 0.50. Meanwhile evaluation towards reliability of the measurement model in GSCA may use the Construct Reliability (CR ≥ 0.70) and Average Variant.
Extracted (AVE ≥ 0.50). The recapitulation of validity and reliability evaluation result can be observed in Table 5 Measurement Model (Outer Model) Evaluation, as follows:

### Table 5. Measurement Model (Outer Model) Evaluation

| Latent Variable | Observed Variable | Convergent Variable | Discriminant Validity | Cronbach Reliability |
|-----------------|-------------------|----------------------|-----------------------|----------------------|
| Contractor (X1) | X1.1              | 0.781                | Valid                 | 0.677                |
|                 | X1.2              | 0.881                | Valid                 | 0.904                |
|                 | X1.3              | 0.884                | Valid                 |                      |
|                 | X1.4              | 0.859                | Valid                 |                      |
|                 | X1.5              | 0.788                | Valid                 |                      |
|                 | X1.6              | 0.810                | Valid                 |                      |
| Owner (X2)      | X2.1              | 0.830                | Valid                 | 0.754                |
|                 | X2.2              | 0.888                | Valid                 | 0.836                |
|                 | X2.3              | 0.886                | Valid                 |                      |
| Designer (X3)   | X3.1              | 0.865                | Valid                 | 0.735                |
|                 | X3.2              | 0.858                | Valid                 | 0.816                |
|                 | X3.3              | 0.849                | Valid                 |                      |
| Supervision (X4)| X4.1              | 0.861                | Valid                 | 0.744                |
|                 | X4.2              | 0.884                | Valid                 | 0.821                |
|                 | X4.3              | 0.843                | Valid                 |                      |
| Success Project (Y)| Y1.1           | 0.834                | Valid                 | 0.683                |
|                  | Y1.2              | 0.876                | Valid                 | 0.884                |
|                  | Y1.3              | 0.789                | Valid                 |                      |
|                  | Y1.4              | 0.926                | Valid                 |                      |
|                  | Y1.5              | 0.810                | Valid                 |                      |

Based on the above table we can acknowledge that the entire Loading factor score ≥ 0.50 (Valid) and the AVE score ≥ 0.50 (Valid). Meanwhile the reliability calculation result shows that all Cronbach Reliability (CR) score ≥ 0.70 (Reliable). Therefore it can be concluded that all of those latent variables have good and proper indicator. In details, in order to acknowledged the most dominant factor in giving contribution towards latent construction is explained as follows:

a. The best indicator in forming Contractor (X1) variable is X1.3 Project Scope with the highest loading factor of 0.884. Therefore in terms of the management intends to increase the variable score of Contractor X1, statistic recommendation on the indicator required to be prioritized for improvement is the X2.2 Promptness to Take Policy indicator.

b. The best indicator in forming Owner X2 variable is X2.2 Slow Decision Making with the highest loading factor of 0.888. Therefore in terms of the management intends to increase the variable score of Owner X2, statistic recommendation on the indicator required to be prioritized for improvement is the X2.2 Promptness to Take Policy indicator.

c. The best indicator in Designer X3 variable is X3.1 Completion of Contract Document with the highest loading factor of 0.865. Therefore in terms of the management intends to increase the variable score of Planning Consultant X3, statistic recommendation on the indicator required to be prioritized for improvement is the X3.1 Contract Document Completeness indicator.
d. The best indicator in forming Supervision Consultant X4 variable is X4.1 Experience with the highest loading factor of 0.884. Therefore in terms of the management intends to increase the variable score of Supervision Consultant X4, statistic recommendation on the indicator required to be prioritized for improvement is the X4.1 Experience of Supervision Consultant indicator.

e. The best indicator in forming Project Success Y1 variable is Y1.2 Time with the highest loading factor of 0.876. Therefore in terms of the management intends to increase the variable score of Project Success Y1, statistic recommendation on the indicator required to be prioritized for improvement is the X1.2 Time indicator.

This part relates with evaluation towards the coefficients or parameters showing causal (cause-consequence) relation or influence of one latent variable towards the other latent variable. A causal relation shall be declared as insignificant in terms of the critical ratio (CR) is between the range of -1.96 and +1.96 with significance level of 0.05. With the aid of Generalized structured component analysis (GSCA) program application, the estimation result of critical ratio of the structural model is obtained. In short the calculation result of the coefficients is presented in the diagram in Figure 3. Structural Model (Inner Model) Path Diagram and table in Table 6. Estimation and Testing Results of Direct Influence as follows:

![Figure 3. Structural Model Path Diagram (Inner Model)](image-url)
Table 6. Estimation and Testing Results of Direct Influence

| Causation Variable | Consequent Variable | Path Coefficient | CR/ t-stat | Conclusion |
|--------------------|---------------------|------------------|------------|------------|
| Contractor (X1)    | Success (Y2)        | 0.775            | 10.07      | Significant|
| Owners (X2)        | Success (Y)         | 0.231            | 2.5        | Significant|
| Designer (X3)      | Success (Y)         | 0.189            | 0.55       | Insignificant|
| Supervision (X4)   | Success (Y)         | -0.307           | 0.98       | Insignificant|

Based on Table 6 Estimation and Testing Results of Direct Influence, the result of estimation and hypothesis testing can be acknowledged. It is acknowledged that the Contractor X1 variable has positive influence towards Success (Y), which means that the higher the Contractor X1 is, the higher also the variable of Success (Y) where the path coefficient obtained is 0.775 with CR score of 10.07. Because the CR score is higher than the critical value (10.07 > 1.96), the statistic hypotheses states that H0 is rejected, which means the Contractor X1 variable has significant influence towards Success Y variable.

It is acknowledged that the Owner X2 variable has positive influence towards Success Y, which means that the higher the Owner X2 is, the higher also the variable of Success Y where the path coefficient obtained is 0.231 with CR score of 1.86. Because the CR score is higher than the critical value (2.5 > 1.96), the statistic hypotheses states that H0 is rejected, which means the Owner X2 variable has significant influence towards Success Y variable.

It is acknowledged that the Planning Consultant X3 variable has positive influence towards Success Y, which means that the higher the Planner X3 is, the higher also the variable of Success Y where the path coefficient obtained is 0.189 with CR score of 0.55. Because the CR score is lower than the critical value (0.55 > 1.96), the statistic hypotheses states that H0 is accepted, which means the Supervision X3 variable has insignificant influence towards Success Y1 variable.

It is acknowledged that the Supervision X4 variable has positive influence towards Success Y, which means that the higher the Supervision X4 is, the higher also the variable of Success Y where the path coefficient obtained is 0.183 with CR score of 0.98. Because the CR score is lower than the critical value (0.98 > 1.96), the statistic hypotheses states that H0 is accepted, which means the Supervision X3 variable has insignificant influence towards Success Y variable.

4. Conclusion
The objective of the research Producing REAL CONCEPT OF FACTORS INFLUENCING PROJECT SUCCESS (CSFs). The analysis result of Confirmatory (CFA) model of four project actors towards the success of government building construction project execution, of the 4 (four) independent variables and 1 (one) dependent variable submitted, having been analyzed, it is obtained that: (1) The result of inferential analysis on the influence of each variable to Project Success: (1a) Relatedness Factor of Contractor Internal and Owner Internal shall have significant influence towards Project Success; (1b) Factors of Designer and Supervision Consultant shall have insignificant influence towards Project Success; (2) The result of relation/correlation inferential analysis between variables with the indicators; (2a) Project Scope Indicator has the strongest relation/correlation towards Contractor’s internal factors; (2b) Slow Decision making Indicator has the strongest relation/correlation towards Owner’s internal factors; (2c) Contract Document Completeness Indicator has the strongest relation/correlation towards designer internal factors; (2d) Experience Indicator has the strongest relation/correlation towards Supervisor’s internal factors; (2e) Period Indicator has the strongest relation/correlation towards Project Success (CSFs)’s internal factors.
References

[1] Amberg. M. A, Fischl. F ,Wiener. M, “Background Of Critical Success Factor Research”, Working Paper NO. 2, 2005.
[2] Sanvido. V, Grobler. F, Parfitt. K, Guvenis. M and Coyle. M, “Critical Success Factors For Construction Projects”, Journal of Construction Engineering and Management, ASCE, Vol. 118, No. 1, pp. 94-111, 1992
[3] Hwang. B. G dan Lim. E. S. J, ” Critical Success Factors for Key Project Players and Objectives: Case Study of Singapore”, ASCE Journal Of Construction Engineering And Management, 2013
[4] Sufa. M. F, ” Identify the Project Success Criteria”, Performa Research, 2012
[5] Jui-Sheng. C and Jung-Ghun.Y, “Project management knowledge and effects on construction project outcomes, Project Management Journal., Vol. 43, No. 5, 47–67, 2012
[6] Ervianto. W, “ Construction Project Management”, Jogyakarta: ANDI, 2005.
[7] Presidential Regulation Number 70 of 2012 and Presidential Regulation 4 of 2015
[8] Messah. Y. A., Widodo, T. dan Adoe, M. L. (2013), "Kajian Penyebab Keterlambatan Pelaksanaan Proyek Konstruksi Gedung di Kota Kupang”, Jurnal Teknik Sipil Vol.II. No.2
[9] http://www.flobamora.net/berita/9485/2016-04-15/tenaga-kerja-nusa-tenggara-timur-di-eramea.html.
[10] Regulation of the Minister of Public Works No. 45 / PRT / M / 2007 About Technical Guidance of State Building Building, 2007
[11] Meredith. J. R and Mantel. S. J, “ Project Management: A Managerial Approach”, John Wiley and Sons, New York, 2006
[12] Hendrickson. C, “ Project Management for Construction, 2nd Edition Prentice Hall, 2010
[13] Oberlender. G, “ Project Management For Engineering And Construction”, Singapore : McGraw Hill International Edition, 1993
[14] Ashley and Jaselskis, “Determinants Of Construction Project Success”,Project Management Journal, Vol.18, No.2, 1987
[15] Khosravi. S and Afshar, ”A Success Measurement Model For Construction Project” ,International Conference on Financial Management and Economics IPEDR vol.11 (2011) © (2011) IACSIT Press, Singapore, 2011
[16] A Guide to Project Management Body of Knowledge, (PMBOK Guide), 4th Edition, Project Management Institute, 2008
[17] Koelman. R. G,"Project Success And Performance Evaluation", International Platinum Conference Platinum Adding Value, The South African Institute of Mining and Metallurgy, 2004
[18] Kerzner. H," In Search of Excellent in Project Management, Journal of Systems Management, p 30 – 39, 1987
[19] Korbijn. G, “ Success criteria and critical success factors for contractors of urgent and unexpected projects”, 2014
[20] Chan. D. W. M and Kumaraswamy. M. M, "A Comparative Study Of Causes Of Time Overruns In Hong Kong Construction Projects", International Journal of Project Management, Vol.15 (1), pp 55-63, 1997
[21] Songer. A. D and Molenaar. K. R, “Project Characteristics For Successful Public-Sector Design-Build”, Journal Construction Engineering Management, 123~1!, 34 – 40, 1997
[22] Dissanayaka. S. M and Kumaraswamy. M. M, “Evaluation Of Factors Affecting Time And Cost Performance In Hong Kong Building Projects”, Engineering Construction Architech Management 6~3!, 287 – 298, 1999
[23] Bryde, D. J, Robinson, L, “Client vs contractor perspectives on project success criteria”, International Journal of Project Management, 23, 622–629, 2015

[24] Babu, S. S, Sudakar, “Critical Success Factors Influencing Performance Of Construction Projects”, International Journal of Innovative Research in Science, Engineering and Technology, Vol.4, 2015

[25] Brahmantariguna, I. A. A, ”The Relationship of Project Manager Competence to the Success of Building Construction Project”, Jurnal Spektran. Vol. 4, No. 2, 2015

[26] Wala, M, “Performance Appraisal of Building Planner Consultant With Analytic Hierarchy Process Method - Studi pada Perencana Bangunan di Manado”, Jurnal Ilmiah Media Engineering Vol. 3, No. 2, ISSN 2087-9334 (99-108), 2013

[27] Chan. A. P. C, Scott. D, Chan. P. L, ”Factors Affecting The Success Of A Construction Project”, Journal of Construction Engineering and Management@ ASCE. Vol 130::153-155, 2004

[28] Tomigolung, F, “Performance Analysis of Supervisory Consultants on Road and Bridge Projects in North Sulawesi”, Ilmiah Media Engineering Vol. 3, No. 2, Juli 2013 ISSN 2087-9334 (79-83), 2013

[29] Slevin. D. P And Pinto. J. K, “The Project Implementation Profile: New Tool For Project Managers”, Project Management Journal, Vol. 18, pp. 57–71, 1986

[30] Otone. M. G and Yusuf, M, ”Factors Influencing Project Performance Among Kenyan Universities In Kisumu Country”, International Journal of Innovative Social Sciences & Humanities Research 3(3):1-12, 2015.

[31] Beleiu. I, Crisan, E dan Nistor. R, “Main Factor Influencing Project Success”, Interdisciplinary Management Research xii, 2015

[32] Mboci. W. J and Moronge. M,”Determinant Of Successful Implementation Of Capital Expenditure Project In The Brewing Sector In Kenya : A Case Of East African Breweries limited‘, International Journal Of Business & Law Research 3(2):1-19 April-June, 2015

[33] Adnan. H, Yusunan. M. N, Yusof. F and Bachik. F, "Critical Success Factors for Contractors”, International Journal of Engineering and Technical Research (IJETR) ISSN: 2321-0869, Volume-2, Issue-2, 2014

[34] Ofori. D. F, ”Project Management Practices And Critical Success Factors—A Developing Country Perspective”, International Journal of Business and Management, 2013

[35] El-Saboni, M. A. G and Sabouni. A, "Electronic Communication Systems Effects On The Success Of Construction Projects In United Arab Emirates”, Advanced Engineering Informatics, 2009

[36] Lester. A, “Project Management: Planning And Control”, Elsevier, New York, 2007

[37] Cleland. D and Gareis. R, “Global Project Management Handbook: Planning, Organizing, and Controlling International Projects”, McGraw-Hill, New York, 2006

[38] Phua. F. T. T, “Modelling The Determinants Of Multi-Firm Project Success: A Grounded Exploration Of Differing Participant Perspectives”, Construction Management And Economics, Vol. 22, pp. 451–459, 2004

[39] Iyer. K. C and Jha. K. N, “Factors Affecting Cost Performance: Evidence From Indian Construction Projects”, International Journal of Project Management, 23: 283–295, 2005.

[40] Ghasabeh. M. S and Chabok. K. K, "Generic Project Success And Project Management Success Criteria and Factors": Literature Review and Survey, JournalWSEAS Transactions On Business and Economics 6(8), 2009

[41] Atout, M. M. Delays Caused by Project Consultants and Designers in Construction Projects”, International Journal of Structural and Civil Engineering Research Vol. 5, No. 2, May 2016
[42] Hwang, B. G and Lim. E. S. J, “Critical Success Factors for Key Project Players and Objectives: Case Study of Singapore”, ASCE Journal Of Construction Engineering And Management. Vol.139(2), 204 - 215. (Tier 1; SCIE; IF - 0.867), 2013

[43] Salleh. R, “Critical Success Factor Of Project Management For Brunei Construction Projects: Improving Project Performance”, 2009

[44] Wala. M, “Penilaian Kinerja Konsultan Perencana Bangunan Dengan Metode Analytic Hierarchy Process-Studi pada Perencana Bangunan di Manado”, Jurnal Ilmiah Media Engineering Vol. 3. No. 2. Juli 2013 ISSN 2087-9334 (99-108), 2013

[45] Diputra. I. G. A, “Sistem Penilaian Konsultan Perencana dalam Menangani Bangunan Gedung”, Jurnal Ilmiah Teknik Sipil, Vol. 13. No.2, 149 – 160, 2009

[46] Darmawan and Rahmad, “Faktor-faktor Yang mempengaruhi Kualitas desain Konstruksi Gedung Menurut Pandangan Konsultan Perencana”, 2008

[47] Kaming. P. F dan Riano. A. G, ”Determinants of Effective Performance for Project Management Consultants”, Konferensi Nasional Teknik Sipil 7, 2013

[48] Irawadi. T. G, “Structural Equation Modelling of Climate Safety and Personal Competency against the Safe Behaviour and its Implications on the Performance of Construction Projects”, Journal of Basic and Applied Scientific Research. Vol. 6(4)pp 72-81, 2015

[49] Nguyen, Ogulana. L. D and Lan. D. T. X, “A Study On Project Success Factors In Large Construction Projects In Vietnam”, Construction and Architectural Management Journal, 2004

[50] Westerveld. E, “The Project Excellence Model: Linking Success Criteria and Critical Success Factors”, International Journal of Project Management, Vol. 21, No. 6, pp. 411-418, 2003

[51] Cooke and Davies. T, “The ‘Real’ Success Factors On Projects”, International Journal of Project Management, Vol. 20, No. 3, pp. 185-190, 2002

[52] White. D and Fortune. J, "Current Practice In Project Management-An Empirical Study", International Journal of Project Management, Vol. 20, pp. 1-11, 2002.