The influence of transformational leadership and soft skills on project manager for project success factors

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Abstract. Construction projects have been identified as one of the most difficult projects to succeed, because they need to lead people effectively to achieve the success of an organization. The lack of influential leaders and the relationship management with team members and stakeholders makes productivity in construction projects is very low, and the emergence of various types of management deviations and project failures in the construction sector have emphasized the needs effective leaders to effectively manage projects and team members. This research conducting a quantitative survey of construction professional minimum with supervisor position and 3 years experiences in construction industry inside Indonesia. Data which already collected will be processed and analysed using the Structural Equation Modelling (SEM). This research has confirmed the effect of transformational leadership and soft skills on project managers influencing project success factors. This research has also found that transformational leadership and soft skills in project managers will be able to increase their contribution in achieving the project's vision, mission and goals.

1. Introduction

The Government of Indonesia a few years ago has intensively carried out infrastructure development to boost the economy, increase competitiveness, productivity and equitable development, but high growth in infrastructure development isn’t directly proportional to the success of its implementation, this is due to the lack of effective coordination between project leaders and diverse stakeholders, both from the government, the private sector, and other project supporting parties so that the results in the implementation of construction projects are still often hampered [1]. Therefore from 2019, physical development will begin to shift to human development in order to complete and maintain the infrastructure that has been built and ensure peoples can continue receive benefits from development, then also adjust to Rencana Pembangunan Jangka Menengah Nasional (RP JMN in 2015 -2020) to strengthen overall development in various fields by emphasizing the achievement competitive of the economy based on the excellence of natural resources and quality human resources as well as the ability of science and technology [2]. Despite advances in technology and management, construction services activities remain a sector that is highly dependent on human resources with a sizable portion of project funds The success of a construction project depends on a number of factors including the project manager's competence, personality, their characteristics, skills and leadership style a project team's collaboration system is a dynamic process involving several factors, and personality project leaders can influence followers and project performance [3]. When project leaders are able to understand the characteristics of followers can be used to optimize the performance results of followers [4].
managers have a variety of ways to lead their teams, the ways the project manager chooses may be personal references, or the results of a combination of various factors related to the project based on existing factors, such as transformational leadership, transactional leadership, laissez-faire leadership, service leadership, charismatic leadership and interactional leadership [5]. Kaming has conducted research on the relationship of emotional intelligence and leadership of managers in construction projects and the results show transformational leadership in carrying out its leadership role, more dominating in construction managers than other leadership like laissez-faire and transactional leadership from data obtained and based on the analysis that has been carried out, this means that managers need to exercise their leadership by inspiring subordinates they lead and providing intellectual challenges so that project team members can be motivated to move forward [6]. Abdul-Rahman said that the factors influencing the success of the cooperation project between Malaysian contractors and Bahrain local companies are ongoing informal communication and coordination meetings because they can provide solutions to problems quickly and high commitment and trust from project leaders’ positive effect on project team members [7]. PMI states a framework for developing project manager professional competencies is also shown by assessing their behaviour in soft skills in addition to hard skills [5]. Leaders who influence and manage relationships better with team members and stakeholders in construction projects are still lacking, and the emergence of irregularities in management and project failures in the construction sector have emphasized the need for effective leaders to manage projects and team members in an effective manner [8]. Based on Djumiril's research on the effect of soft skills of construction workers in the work productivity of 5 competencies needed by construction workers in Indonesia that can affect work productivity, namely; team work; work attitude; problem solving; communication and work ethics [9]. Zachawerus through his writing about the factors that influence the success of national road development projects in North Maluku, states that it is necessary to conduct research on projects success factors with different objects, so that other facts about project success factors can be known in each stage of construction, namely; the conceptual; planning; procurement; implementation and maintenance stages [10]. So based on the background, this paper aims to look at the influence of transformational leadership and soft skills on project managers for project success factors construction in Indonesia.

2. Method

Research strategy will be carried out by means of a quantitative survey, a survey carried out by taking a sample from one population using a questionnaire for primary data collection tool. This research survey was conducted on several correspondents who had been determined in advance. The sampling method used is non-probability sampling with a purposive sampling procedure. With nonprobability sampling, members of the population do not have the same chosen opportunity to be sampled and the purposive sampling procedure of sampling techniques is quite often used because this method uses criteria that have been selected by researchers in selecting samples. According to Sugiyono that purposive sampling is a data source sampling technique with certain considerations that can fit the phenomenon under study for answer the hypothesis of this research [11]. This research sample used is a minimum number of 300 samples. In collecting data by distributing questionnaires to the correspondents faced with the issue of the level of trust given to the data, it is necessary to test the level of reliability and validity of the questionnaire data first [12]. Based on the explanation above, the measurement of data results will be use a Likert scale. Likert scale is used to measure the opinion of respondents regarding the extent of the causes and impacts of each variable using a scale of 1 to 5. Scale 5 has the highest impacts and scale 1 has the lowest impacts.

3. Results

In the previous chapter, the methodology and data analysis used in this study have been explained. The data in this study consisted of primary data obtained directly from the source, primary data collection was carried out through a questionnaire survey, the questionnaire contained several conditions to obtain the research sample as expected, namely construction project professionals with a minimum of 3 year
experiences and minimum supervisor job position in Indonesia. Data collected from 392 respondents, only 314 valid respondents that can be used as samples, because the existing questionnaire uses the condition if the respondent is positioned as a staff and their experiences in project less than 3 years in a construction project can’t continue to fill out the questionnaire. The results can be seen that the average variance extracted (AVE) roots of each construct are greater than the correlations between constructs on different variables in the model, so the constructs and indicators in this study have good discriminant validity. Convergent validity test was carried out in this study because the indicator model specified was a reflective indicator model. Measurement of convergent validity can be seen in factor loading values greater than 0.6 - 0.7, and AVE value must be above 0.5 - 0.6. But sometimes for the newly developed research the value is difficult to achieve because it only uses cross sectional, then loading factors 0.4 - 0.7 need to be considered, according to the theory of Hair et al. (2013).

### Table 1. SEM PLS outer model results.

| Variables and Subvariables                      | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|------------------------------------------------|------------------|-------|-----------------------|----------------------------------|
| Comfort                                        | 0.695            | 0.703 | 0.803                 | 0.451                            |
| Commitment                                     | 0.743            | 0.745 | 0.854                 | 0.661                            |
| Communication                                  | 0.625            | 0.631 | 0.799                 | 0.571                            |
| Competence                                     | 0.777            | 0.779 | 0.857                 | 0.6                              |
| Cognitive skills                               | 0.839            | 0.842 | 0.888                 | 0.615                            |
| Transformational leaderships                   | 0.918            | 0.919 | 0.928                 | 0.392                            |
| Team works and collaboration                   | 0.809            | 0.815 | 0.867                 | 0.567                            |
| Effectively communication                      | 0.784            | 0.786 | 0.853                 | 0.538                            |
| Conflict management                            | 0.789            | 0.793 | 0.856                 | 0.544                            |
| Achievement motivation                         | 0.815            | 0.818 | 0.871                 | 0.575                            |
| Motivation                                     | 0.724            | 0.726 | 0.829                 | 0.547                            |
| Attribute idealism                             | 0.764            | 0.765 | 0.85                  | 0.586                            |
| Behaviors idealism                             | 0.76             | 0.762 | 0.848                 | 0.582                            |
| Individual consideration                       | 0.716            | 0.725 | 0.824                 | 0.541                            |
| Project Success Factors                        | 0.897            | 0.904 | 0.913                 | 0.416                            |
| Soft skills                                    | 0.945            | 0.945 | 0.95                  | 0.431                            |
| Intellectual stimulation                       | 0.767            | 0.77  | 0.851                 | 0.59                             |

Table 1. Results above it can be seen, the loading factor and AVE values for all variables are above the threshold value. AVE value is above 0.5. Loading factor composite reliability is above the value of 0.7. The reliability test is different from the validity test, because the test results on the validity test are seeing AVE results that exceed the threshold of 0.5, while the reliability test looks at composite reliability. Based on Table 4.9 the lowest composite reliability is communication that is 0.799 while the largest soft skills is 0.95, this indicates that all variables have a composite reliability > 0.7, so it can be concluded that the constructs and indicators in this study are reliable.
**Table 2. SEM PLS inner model results.**

| Variable and Subvariables | T Statistics |
|---------------------------|-------------|
| Transformational Leadership -> Motivation | 44.198 |
| Transformational Leadership -> Attribute idealism | 45.088 |
| Transformational Leadership -> Behaviour idealism | 42.999 |
| Transformational Leadership -> Individual consideration | 33.859 |
| Transformational Leadership -> Project Success Factors | 3.866 |
| Transformational Leadership -> Intellectual Stimulations | 24.945 |
| Project Success Factors -> Comfort | 27.587 |
| Project Success Factors -> Commitment | 47.859 |
| Project Success Factors -> Communication | 33.523 |
| Project Success Factors -> Competence | 81.84 |
| Soft skills -> Cognitive skills | 35.04 |
| Soft skills -> Team works and collaboration | 47.522 |
| Soft skills -> Effectively communication | 46.067 |
| Soft skills -> Conflict management | 54.354 |
| Soft skills -> Achievement motivations | 53.224 |
| Soft skills -> Project Success Factors | 9.4 |

Based on Table 2, the summary of SEM PLS inner model results are soft skills become the more influential on project success factors than transformational leadership, because soft skills T-statistics value is 9.4 and transformational leadership T-statistics value is 3.866. T-statistic value is confirm if the value is > 1.96 with indicate a significant level of 5% [13].

**Table 3. SEM PLS inner model results.**

| Variable and Subvariables | R Square | R Square Adjusted |
|---------------------------|----------|-------------------|
| Project Success Factors   | 0.713    | 0.711             |

Based on Table 3, bootstrapping results can be seen that the construct of performance has an R-Square Adjusted 0.711 value on project success factors, 0.711 shows that 71.1% of the variance of project success factors can be explained by transformational leadership variables and soft skills in project managers, while 28.9% the other is caused by other factors outside the construct of the model. Transformational leadership has a positive effect on project managers on project success factors in the Construction Industry in Indonesia. H0: Transformational leadership has no significant effect on the Project Success Factors variable. H1: Transformational leadership has a significant effect on the Project Success Factors variable, because in the table above the value of T-statistics = 3.866 > 1.96 so that H0 is rejected, and H1 is accepted, which means the transformational leadership variable has a positive and significant effect on the project success factors variable. Soft skills in project managers have a positive effect on project success factors in the Construction Industry in Indonesia. H0: Soft skills do not significantly influence the Project Success Factors variable. H1: Soft skills significantly influence the Project Success Factors variable, because in the table above the value of T-statistics = 9.4 > 1.96 so H0 is rejected, and H1 is accepted, which means that the soft skills variable has a positive and significant
effect on the project success factors variable. There is a relationship between transformational leadership and soft skills in construction industry project managers in Indonesia. H0: There is a relationship between transformational leadership and soft skills in construction industry project managers in Indonesia. H1: There is a relationship between transformational leadership and soft skills in construction industry project managers in Indonesia, because if you look at the SEM PLS results in Table 6. There is a correlation value between soft skills and transformational leadership of 0.838 out of 1, which means 83.8% have a relationship or relationship between the variables of soft skills and transformational leadership.

### Table 4. Variables correlations.

|                        | Transformational Leaderships |
|------------------------|-----------------------------|
| Soft skills            | 0.838                       |

4. Discussion

The findings of this study were found in the construction industry in Indonesia, which may be different from other country contexts. Despite the limitations, this study has provided project managers with an understanding of soft skills and transformational leadership of project success factors in the Indonesian construction industry. This study confirms five sub-variables of soft skills, five sub-variables of transformational leadership, and four sub-variables of project success factors. The number of studies that have attempted to investigate the relationship between soft skills, transformational leadership and project success factors is very small, but this study, has contributed significantly to the literature relating to project management. Through empirical testing the quantitative effects of the influence of soft skills and transformational leadership on project managers on project success factors. This research has confirmed the effect of transformational leadership and soft skills on project managers influencing project success factors. This research has also found that transformational leadership and soft skills in project managers will be able to increase their contribution in achieving the project's vision, mission and goals. Apart from the achievement of objectives, this study, inevitably, has several limitations such as; because of the difficulty in constructing probability samples, non-probability samples are used in this study. Apart from inherent limitations, this sampling method of respondents was not randomly selected from the entire population, but was chosen based on their willingness to participate in the study and the linguistic term used on the Likert scale, such as neutral, can cause some bias in the subjective assessment of the respondent.

5. Conclusion

Transformational leadership and soft skills on project managers will help identify and select people who not only excel in project management, but will also be more likely to get the best performance such as financial performance, organizational commitment, job satisfaction, safety culture and innovation from their construction team. Transformational leadership and soft skills on project managers will help foster more collaborative working relationships, encourage a team approach to problem solving and a willingness to find cost-effective and innovative solutions for the benefit of individuals, teams, clients and the industry as a whole. Therefore, leaders to be more effective in managing projects and teams, so that infrastructure will complete and maintain infrastructure to ensure peoples can continue to receive benefits from development, and also achieve economic competitiveness based on superior natural resources and quality of human resources and the ability of science and technology. Although this research focuses on the Indonesian construction industry, this method can also be used by other countries. From a practical perspective, this study highlights the list of soft skills and transformational leadership for professional project managers. Thus, construction industry practitioners, especially management or project owners can adjust their own project management manuals in an effort to increase the likelihood of project success. For example, more soft skills training and transformational leadership
for their project managers to develop project management professionals to achieve project success factors. Future research opportunities are expected to investigate the effect of the relationship between soft skills and other leadership styles on project success factors or a discussion on the effect of soft skills on reducing work accident rates or the success criteria of construction projects in Indonesia can be conducted.

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