

INFLUENCE OF REWARDING AND PUNISHING ON PROJECT SUCCESS AMONG KUANTAN MALAYSIAN CONSTRUCTION INDUSTRIES



S A A Aziz¹ and A Q Adeleke¹

¹Faculty of Industrial Management, Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300, Gambang, Pahang, Malaysia



ABSTRACT

In project-based organizations, studies into the role of leadership have usually concentrated on project managers or top management but less on leaders who coordinate several projects in order to improve project performance. This study, therefore, examines the role of leadership behaviors (e.g. reward and punishment) on project success among Kuantan, Malaysian construction industries. Using a questionnaire survey, the data were collected from 107 respondents among Kuantan construction companies. PLS-SEM techniques were used in this research to assess both the measurement and structural models. The study found a positive and significant relationship between leadership behaviors measures with reward and punishment on project success in Kuantan, Malaysia. The study reinforces the relevance of leadership behaviours in improving project success and also highlights the necessity for project-based organizations to enhance their performance.

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Keywords: Project Management, Leadership, Rewarding Behavior, Punishing Behavior, Project Success

1. INTRODUCTION

The construction industry has been described as one of the most demanding industries for efficiently leading individuals to accomplish organizational success. It continues to remain people's dependent field, considering the advancements in infrastructure, with a large share of expenses in most projects invested on human capital (Loosemore et al. 2003). Leadership is important in building and executing a creative corporate structure, suitable organizational framework, promoting knowledge sharing of creativity, inspiring team standards for innovation, and so on. Individuals from a diverse variety of contexts and working cultures are brought together in complex operational environments to meet short-term project objectives Potter et al. (2018). It is an essential element for determining the level of employee effectiveness



in an organization [Amabile et al. \(2004\)](#); [Peterson \(2009\)](#). The effects and attributes of project managers or practitioners on the project success have been studied in particular [Damanpour and Schneider \(2006\)](#); [Gambatese and Hallowell \(2011\)](#). As a result of duration limit, ambiguity and diverse partners in temporary organizations leadership, unique approaches are often required in project settings [Bakker \(2010\)](#); [Maaninen-Olsson and Müllern \(2009\)](#) and leaders in the time-based organizations should give room for their teams' members to exhibit their distinct creativity [Tyssen et al. \(2013\)](#).

The leadership of construction managers has been seen as an essential skill to inspire and empower workers to participate and accomplish the organization target [Tyssen et al. \(2013\)](#), likewise a key performance measure in project management and a central element in the sense of team building [Aga et al. \(2016\)](#); [Ahmed et al. \(2013\)](#), [Banks et al. \(2016\)](#). Generally, construction industry leadership has centered on strength, influence and power to compel individuals to carry out the duties and procedures mandated by the leader and the organization [Ofori \(2008\)](#). The awareness of construction leadership has grown beyond work orientation to concentrate on the value of the results of the group members and the success of the project [Ofori \(2008\)](#). According to [Munns and Bjeirmi \(1996\)](#), a project success may be considered to be the achievement of a specific objective involving several activities and task that consume resources which must be completed within the specified specification with definite start and end dates. Preliminary studies emphasized the value of improving construction project managers' leadership qualities above technical skills growth [ur Rehman Toor and Ofori \(2008\)](#).

Established psychological evidence indicates that deeper degrees of emotional intelligence and leadership behaviors such as reward and punishment are needed to handle a large group of employees effectively, such as those found in the construction industry [Gardenswartz et al. \(2010\)](#). Reward and punishment were being introduced into the field in 1970 as leadership behavior [P. M. Podsakoff et al. \(2006\)](#) and since then have been seen as central to the role of leaders because it is an important determinant of employee attitudes, perceptions and behavior. Reward behavior contains positive contingent upon appropriate task behavior while punishing is containing negative contingent. Though earlier studies recognize leadership as a crucial component of performance in construction (e.g., [Ozorhon et al. \(2010\)](#)), and it continues to be viewed as an overall management strategy to facilitate the sharing of expertise and inspire team spirit.

To promote good leadership behavior, a significant concentration on reward and punishment is important, which in turn increases success and performance across different organizational contexts [Sabodin and Adeleke \(2018\)](#); [Goleman et al. 2013](#)). Contemporary justification has shown the association between leadership and performance embraced by project managers in various sectors of the industry [Barbuto and Burbach \(2006\)](#), [Gardner and Stough \(2002\)](#). While these analyses have concentrated on project managers, the findings cannot be entirely implemented in

the construction industry due to the primary emphasis on technical capabilities [ur Rehman Toor and Ofori \(2008\)](#). Presently, there has been dearth studies specifically relating to leadership behavior in the construction industry. This study, therefore, explores the dominant leadership behavior embraced by construction project leaders, and (ii) explores the relationships between the various leadership behaviors and project success, in order to offer suggestions for improving leadership behavior, as well as improving social interactions and project success in the construction industry. In addition, there is a lack of thorough inquiries into the effectiveness of various forms of leadership factors on the project performance of the construction industry. Therefore, the purpose of this study is to investigate the relations between reward and punishment as different leadership behaviors on project success within Malaysian construction companies.

2. LITERATURE REVIEW

2.1 AN OVERVIEW OF MALAYSIA

Malaysia is the 68th largest country in the world according to Central Intelligence Agency, 2020 website with a total area of 329,847 square km with a total population of 32.68 million in the fourth-quarter 2019, increased by 0.6% compared to the fourth quarter in 2018 according to Department of Statistics Malaysia Official Portal, 2018. The population of Malaysia is unevenly split between the Peninsula and East Malaysia with the large majority living in the Peninsula of Malaysia. The population has a great deal of ethnic linguistic, cultural, and religious diversity. Within this diversity, a major distinction is made for administrative purposes between indigenous peoples (including Malays), commonly known as Bumiputra, and immigrant populations (primarily Chinese and South Asians) known as non-Bumiputera.

In the 73 years following independence, Malaysia adopted two economic policies and two industrialization strategies that were instrumental in the country's journey towards industrialization [Omer and Adeleke \(2019\)](#); Okposin, 2005). The two economic policies were the New Economic Policy and the National Development Policy, and the two industrialization strategies were the Import Substitution Industrialization (ISI) strategy and the Export-Oriented Industrialization (EOI) strategy. According to [Mah et al. \(2019\)](#) the key to the success of the ISI and EOI strategies was the 'Malaysia Incorporated' policy, introduced in 1983, which emphasized public-private sector relationships. The resulting partnership between the public and private sectors helped to re-engineer the business environment in the 1980s and 1990s.

2.2 THEORIES AND HYPOTHESES

2.2.1 TRANSFORMATIONAL AND TRANSACTIONAL LEADERSHIP IN CONSTRUCTION SETTINGS

In the evolving landscape, such as the time-limited project-based organization in a project setting, project leadership has been regarded as a potential to create and

enhance versatile project teams that can motivate employees to perform towards the dedicated objective Cullen and Leavy (2017); Tyssen et al. (2013), which is characterized by short-term impacts Müller, Zhu, et al. (2018). Thus, implementing a more responsive leadership approach has remained more essential for project administrators, and successful leadership of projects has become an interesting element in the associated project management literature Drouin et al. (2018); Yukl and Mahsud (2010). Project managers prefer to use various types of leadership as per the features of the project, characteristics of the project, and sometimes as a result of their personality traits Drouin et al. (2018). In more complicated projects, project leaders tend to exhibit transformative leadership styles, and transactional leadership styles in easier projects Müller, Sankaran, et al. (2018).

Transformational leadership is characterized as charismatic, innovative and motivating leadership behaviors that affect employees to broaden their goals and operate outside the demands of the job Qu et al. (2015). On the other hand, Transactional leadership relates to a leading activity in which the aims of interaction between superiors and subordinates are conveyed by expressing basic criteria and providing incentives based on the expected objectives Kanimoli et al. (2020); Deichmann and Stam (2015) and this style of leadership behavior involves two dimensions which are; rewards and management by exception Chan et al. (2014), the leader reiterates goals and provides the incentives to achieving such goals while the degree to which the leader takes disciplinary decisions on the grounds of leader-follower interaction outcomes is referred to as management by an exemption, and this may be active or passive Judge and Piccolo (2004). A reward is a large concept that has been said to reflect something that an employee can appreciate in return for their efforts that an employer is willing to give Jamil and Adeleke (2018); Chiang and Birtch, 2008). The absence of rewards can establish an uncomfortable atmosphere, thus reducing the working performance. Rewards are more and more relevant for these purposes. The primary goals of rewards are to encourage and preserve workers to achieve high standards of efficiency and improve their desirable actions.

One of the most prominent leadership studies in the area of project management was transformational leadership and transactional leadership Lai et al. (2018); Tyssen et al. (2013); Azman and Adeleke (2018). The direct and indirect influence of leadership in the sense of the construction industry has also been discussed in prior studies. On the one hand, the direct influence of leadership, for instance, the role of transformational leadership has also been examined as a measure for employee performance in construction companies Chan et al. (2014). In addition, the significant and positive effect on leadership morale and job satisfaction has also been investigated Laglera et al. (2013) and the indirect of the effect of leadership factors at the project team level Ding et al. (2017); Ismayana and Adeleke (2020).

2.3 LEADERSHIP RESEARCHES IN THE CONSTRUCTION INDUSTRY

According to Bass and Bass (2008), leadership refers to “an interaction between two or more members of a group that often involves a structuring or restructuring of the situation, perceptions and expectation of the members directing the attention of other members to goals and the paths to achieve them” (p. 25). While leadership is one of the most important issues in management literature given the considerable volume of study and publications on the field, many researchers have not been able to express the concept of leadership Giritli and Oraz (2004). Also, not much work has been done in the construction field, in particular on leadership Odusami et al. (2003). Ismayana and Adeleke (2020) claim that the majority of construction industry leadership studies focus on examining the personality attributes of project managers and few research concentrate on transformational leadership styles. Nevertheless, scholars have expressed more involvement over the past few years owing to the evolving nature of the construction industry and the growing recognition of individuals view on project management ur Rehman Toor and Ofori (2008); Limsila and Ogunlana (2008). In their analysis on Thai construction firms, Limsila and Ogunlana (2008) revealed a correlation between leadership behaviors and work efficiency. According to their report, the quality of work is positive on project performance, in the style of transformational leadership with motivational encouragement and intellectual stimulation. Enshassi and Burgess (1991) also reported that there is a close connection between the leadership styles of building site operators and the performance of their workers in another analysis on Middle East building site administrators. In their research on the correlation between project leadership team structure and construction project performance in Nigeria, Odusami et al. (2003) found that there was a substantial correlation between the technical competence of the project leader, his approach to leadership, team structure and entire project success. Leadership studies is becoming increasingly relevant in construction management because it can have a direct effect on job efficiency and project results. A suitable leadership strategy will influence the performance of subordinates in a favorable manner and promote the effective running of construction projects. In addition, little consideration was paid to leadership strategies and approaches in Malaysian construction firms. This study therefore, continues with the following objectives according to the limitations and lack of future research in leadership behaviors/activities in the construction industry of Malaysia.

2.4 THE RELATIONSHIP BETWEEN THE LEADERSHIP BEHAVIOR AND PROJECT SUCCESS

According to Müller and Turner (2007) soft-success factors is the role of the project manager as a leader, as opposed to the manager. Leaders are the ones doing the right thing. Leadership is one of the main topics of social sciences and management and has a long history and a range of schools of thought. The trait school claimed that successful leaders share common traits Rahman and Adeleke (2018); Serrador and

Turner (2015). Because the leader is the key person who is in charge, it should pay attention to the small detail of every part of the construction process. The behaviour of reward and punishment of the leader should be utilized properly by the leader in order to achieve the goal of a successful project. This study, therefore, initiates these relationships by putting the following hypotheses forward:

Hypothesis 1: There is a significant relationship between reward and project success.

Hypothesis 2: There is a significant relationship between punishment and project success.

2.5 CONCEPTUAL FRAMEWORK

This research will be carried out by using the identified model that clearly define independent variables and a dependent variable that was in this study. The conceptual framework is based on the independent variables (e.g. reward and punishment) and the dependent variable (project success). Meanwhile, the framework will show the link between the independent variables and dependent variables in the final results of this research either significantly or not. Figure 1 shows the conceptual framework of the role of leadership behavior on project success.

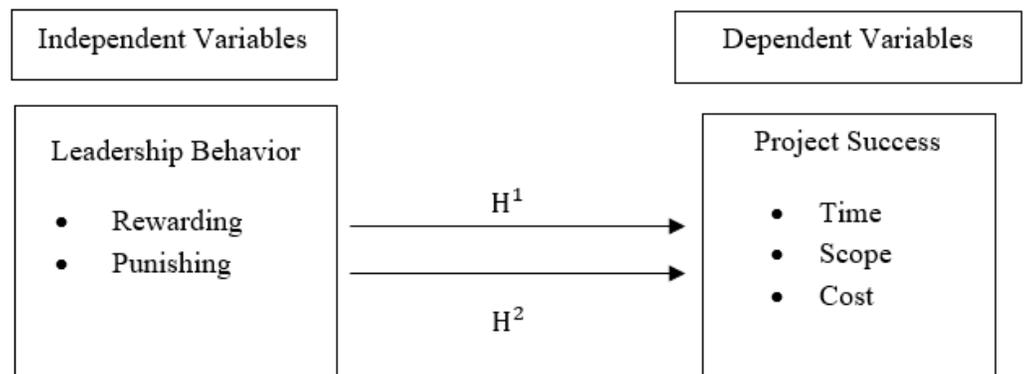


Figure 1 Conceptual Framework

3. METHODOLOGY

This chapter discusses the methodology in terms of data collection, sampling technique, and measurement used to process the data. The study design for this research is a cross-sectional and quantitative method. Cross-sectional survey-based research is characterized as data obtained from individuals that are similar in the same characteristic as having nearly the same knowledge of leadership behaviour and project success and the quantitative approach is used where data is based on the findings of the statistical data. The researcher decided to choose quantitative study styles because of many factors such as spending a shorter time compared to qual-

itative methods. Quantitative approaches must differ with unstructured and semi-structured techniques as well as cost reductions as they can be distributed electronically [Ishtiaq \(2014\)](#). For the distribution of the survey, the data will be collected from the different construction companies in Kuantan Pahang, Malaysia which had registered under CIDB.

3.1 IMPLEMENTATION DESIGN

To make sure that all variables in the research framework are measured, items for this study were reviewed from the previous research to construct the (reward, punishment and project success factors). Similarly, the study adopted to use the scale from '0.1'=very low, '0.3'=low, '0.5'=medium, '0.7'=high, '0.9'=very high. This instrument will be used to assess respondents' feedback. The measurement element shows that data is accurate and true and can be used for further study. There are three variables to this measurement. Which are reward, punishment and project success. The independent variables (e.g. reward and punishment behaviour) was measured with 8 and 7 items respectively and project success which is the dependent variable was measured with 10 items. All the variables measurement were adapted from the prior studies [Malik and Adeleke \(2018\)](#).

Table 1 Summarize the survey instrument in the questionnaires

Section	Description	Variable	No. of item
1	Demographic	-	8
2	Reward	IV's	8
	Punishment	IV's	7
3	Project success	DV's	10
Totals			33

4. RESULTS

Profile of the Respondents

Out of 110 sets of questionnaires that were distributed to the construction companies in Kuantan, Pahang, 107 copies were duly completed and returned which represent 97% of the study's response rate. This is acceptable because the sample size for this research is 107 respondents [Taofeeq et al. \(2019\)](#).

Table 2 Summary Profile of Respondent

Demographics	Count	Percentage
Gender		
Female	70	65.42%
Male	37	34.58%

Continued on next page

Table 2 continued

Type of construction entity		
International	14	13.08%
Local	92	85.98%
Multinational	1	0.93%
Individual Experiences		
1-3 years	35	32.71%
4-6 years	23	21.50%
7-9 years	28	26.17%
<10 years	21	19.63%
Position in company		
Cleaner	3	2.80%
Client	3	2.80%
Contractor	14	13.08%
Document controller	3	2.80%
Engineer	17	15.89%
Project Manager	19	17.76%
Safety Officer	14	13.08%
Workers	34	31.78%
Company Expertise		
Apartment/ Housing	41	38.32%
Bridge	19	17.76%
Cleaner	1	0.93%
Industrial	2	1.87%
Railway	21	19.63%
Road	23	21.50%
The prime location of the company		
Across Malaysia	44	41.12%
International	7	6.54%
Local market area	56	52.34%
Company established		
1-3 years	23	21.50%
4-6 years	13	12.15%
7-9 years	19	17.76%
<10 years	52	48.60%
Total Employee		
0-50	11	10.28%
101-150	31	28.97%
51-100	49	45.79%
<150	16	14.95%
Grand Total	107	100.00%

Source: Smart PLS Output Data

4.1 MEASUREMENT MODEL

The evaluation of the measurement model (outer model) was performed in the first phase of the PLS-SEM analysis. The PLS-SEM method and the SmartPLS 3 statistical software were used to evaluate the hypothesised model. PLS-SEM is a non-parametric, multi-variate approach used to approximate latent path models. The PLS-SEM methodology and the SmartPLS 3 statistical approaches have been used to approximate the model. Composite reliability, outer loading, Cronbach alpha, Average Variance Extracted (AVE for Convergence Validity) and discriminatory cross-loading, Fornell-Larcker parameters and hetero-mono-tract data ratio were used to analyse the calculation models.

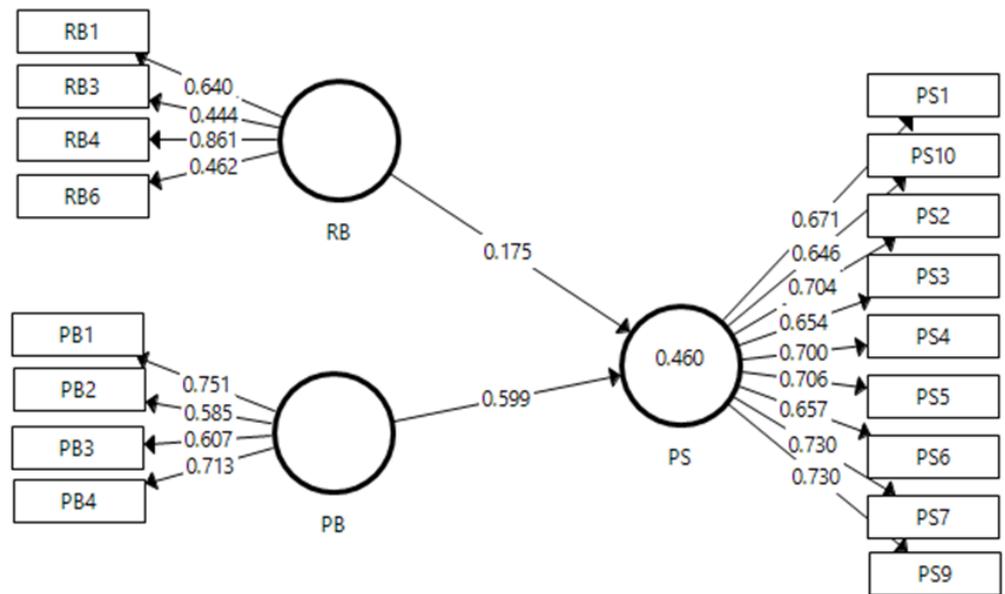


Figure 2 Hypothesized PLS Path Model

Based on [Table 3](#), the convergence value of the outer loading, Cronbach's Alpha, Composite Reliability (CR) and Average Variance is shown (AVE). The external loading value for each constructed object is different, but for Cronbach's Alpha, CR and AVE it is the same for the same construct group item. Composite Reliability (CR) must be greater than 0.80, outer loading must be not less than 0.50, the Average Variance Extracted (AVE) value must be greater than 0.50 for each construct, and 0.60 Cronbach alpha coefficients are considered sufficient [Henseler et al. \(2015\)](#).

Iso shows the lists of Cronbach's alpha of the variables used in this study ranged from 0.516 to 0.970 and the CR scores of all constructs (Punishment Behaviour = 0.761, Project Success = 0.891, and Reward Behaviour = 0.704), all exceeded the recommended criterion of 0.7, demonstrating high internal consistency or the appropriateness of the scales used in this study. The outer loading value for PB1 = 0.751, PB3 = 0.607, PB4 = 0.713. The Cronbach's Alpha for PB is 0.589 and the AVE is 0.446

which is higher than the recommended value which is 0.40. For the PS1, the outer loading is 0.751, PS2 = 0.704, PS6 = 0.657, PS9 = 0.730 and lastly PS10 = 0.646. The Cronbach’s Alpha score is 0.862 and the AVE is 0.475.

Table 3 Convergent Validity

Construct	Item Code	Outer Loading	AVE	CR	Cronbach’s Alpha
PB	PB1	0.751	0.546	0.761	0.589
	PB2	0.585			
	PB3	0.607			
	PB4	0.713			
PS	PS1	0.671	0.575	0.891	0.862
	PS10	0.646			
	PS2	0.704			
	PS3	0.654			
	PS4	0.700			
	PS5	0.706			
	PS6	0.657			
	PS7	0.730			
	PS9	0.730			
	RB	RB1			
RB2		0.444			
RB3		0.861			
RB4		0.462			

Discriminant validity is essential for the construct validity of the outer model. The discriminating validity had to be checked until evaluating the hypotheses by path analysis. It shows the degree to which the objects are different between the constructs

Table 4 Discriminate Validity

	PB	PS	RB
Punishment Behaviour			
Project Success	0.889		
Reward Behaviour	0.589	0.492	

The structural model was used to evaluate the role of reward and punishment as leadership factors on the success of the project. Parameters for determining how well the data served the hypothesised relationship were the coefficient of determination (R² values) and the coefficient of direction (beta values, β) Henseler et al. (2015). In addition to explained variance (R²), the path coefficients defined how well the data support the model of this research with several 5,000 bootstrap samples and 107 cases. The hypotheses of this research have been defined in a directional form, which is the power of the single-tailed test Richter et al. (2014) .

Table 5 Summary of Hypotheses Testing

Hypothesis	Path	Std. Beta	Std. Error	t-value	p-value	Decision
H1	PB -> PS	0.599	0.08	7.696	0.000	Supported
H2	RB -> PS	0.175	0.084	1.899	0.029	Supported

Note: $p < 0.05$ (1-tailed)

R^2 values showing the endogenous variable contribution to exogenous variables were also assessed. The R^2 values is 0.460

Table 6 Value of R^2

R Square	
R	0.460

For multiple independent variables, f^2 was carried out on a dependent variable, which is used to test the changes in R^2 in an effort to understand whether or not of particular independent latent construct and dependent latent construct has a practical impact [Yulia and Azhar \(2020\)](#).

Table 7 Value of F^2

	PB	PS	RB
PB		0.588	
PS			
RB			0.050

In particular, the Q^2 statistic of 0.195 was confirmed in the results. The predictive validity of the model is defined for the endogenous latent variable of this analysis, which is greater than zero [Steve et al. \(n.d.\)](#).

Table 8 Value of Q^2

Q^2 (=1-SSE/SSO)	
PB	
PS	0.195
RB	

5. DISCUSSION

This study was conducted to investigate the role of reward and punishment as a leadership behavior in the performance of the project among the Kuantan Malaysian con-

struction industry. This research responds to the recommendation made by Turner and Müller (2005) to devote further interest to the impact of the leadership styles of project managers in the project delivery context. Similar studies have been performed in a variety of sectors, such as the utility sector, the telecommunications industry, the hospital industry, and even government agencies. A lot of similar studies have been conducted to prove the role of leadership on the performance of the project in the construction process, thereby producing a better or more valid result.

This research was also applied to those involved in the construction industry to assess the reliability of IV's and DV's in this study, which will improve the stability of the academic study. The influence of reward and punishment on project success was found to be positive, which reflects the effectiveness of leadership behavior in temporary project organizations. To more efficiently improve project success, reward and punishment should be adopted and implement, as bonus or fine is an appropriate option for the construction industry to facilitate project performance. This is aligned with the findings of [Waldman and Atwater \(1994\)](#), who reported that leadership behavior of elevated leaders had a positive effect on project outcomes in a study of R&D project teams. Also, [Keegan and Hartog \(2004\)](#) discovered in their study that leadership behavior has a positive effect on employees' engagement and creativity which may, in turn, impact the efficiency of workers in the project environment. The results differ from the findings of [Chan et al. \(2014\)](#) who found the negative of transactional leadership in construction firms. These findings explain the relationship between leadership behavior and performance of the construction industry, showing that when there is an element of reward and punishment project leadership and their members perform excellently.

6. CONCLUSION

The goal of this study was to explore the role of punishment and reward as a leadership behavior on project success among the Kuantan Malaysian construction industry. The construction industry has been identified as an industry with high formal project management and poor organizational management. To improve the project performance in the industry, the leadership structure of the industry must be enhanced. The findings from this study show that all components of leadership (e.g reward and punishment behavior) were positively and significantly correlated and enhanced the project success of the construction industry. The leadership behavior constructs; reward and punishment were seen to be relevant in improving employees' attitude towards project success. Our findings supported the stand of reward and punishment behavior as a framework for enhancing project success. Thus, leaders who demonstrate leadership behaviors such as reward and punishment may raise the standard of follower outcomes, and thereby boost the company's efficiency. For any construction firm, successful leadership is necessary and its implementation is an integral factor that plays a critical function in project management performance.

In addition, good project success and outstanding job results are always desired, but they often do not exist. Typically, individuals only react well to suitable leadership behaviors. The right behavior will bring them to work successfully. The focus of situational leadership is therefore that there is no "best" leadership behavior, and leaders should be versatile and adapt their behaviors to various circumstances. These findings show the necessities for the practitioners to place high importance on leadership behavior in the construction industry

7. THEORETICAL AND PRACTICAL IMPLICATIONS

The findings of these study came with some theoretical implications and part of them are; it responds to previous calls for the usefulness and recognition in temporary project-based organization various leadership behavior factors (i.e. reward and punishment). This research does not only establish that transformative leadership influences the creative actions of project team members, but also that transactional leadership also plays a role in the settings of temporary project organizations. This strengthens our perception of transformational leadership and transactional leadership in the performance of temporary project-based organizations. Hence, these findings, therefore, provide the critical criteria for selecting and recruiting suitable project leaders on the basis of the scope and behaviors of transformational leaders and transactional leadership in order to encourage project leaders to establish more than one successful leadership behavior. In addition, this study contributes to project management/construction literature by incorporating divergent leadership behaviors, as this will widen our knowledge on the project leadership behavioral variables in motivating employees in construction projects.

The practical implication emphasizes that construction companies should enable project managers to become more conscious of aspects of corporate culture, change and adjust their own actions to best reflect the values expressed by project participants. Therefore, project organizations need to provide project administrators with learning programs not to only help them adapt leadership behaviors to the importance of project management, but also to make unique leadership behaviors to suit the organizational atmosphere of the project and the expectations of project participants. In addition, this research would be worthwhile and add value to the academic world due to a lack of study among staff employed in one of Malaysia's high-demand industry markets.

8. RESEARCH LIMITATION

This study was performed only in the construction industry in Kuantan. The study should include a wider number of nationals in order to achieve a more reliable result, and the results will be helpful in maintaining stability in the study. In addition, the data collected for this analysis is only applicable to employees in the construction

industry. It can only be used to assess successful communication on the construction industry and not for other industries/sectors.

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