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Relationships among Team Trust, Team Cohesion, Team Satisfaction, Team Effectiveness and Project Performance as Perceived by Project Managers in Malaysia

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Abstract

Today, more and more project teams are formed to achieve organisational objectives as organisations generally recognized the importance and benefits of project teams. Rationales for this study include: (a) it is unclear from literature what kind of relationships among performance outcomes, team attitudinal outcomes and team behavioural outcomes in a project setting, (b) it is unclear from literature what are the team outcome factors that can predict project performance, and (c) what kind of result team outcome factors can produce in a project setting whereby there is resource and time constraints compare to normal work teams which are ongoing and operational in nature. This study developed a research model underpinned on Cohen & Bailey's (1997) Team Effectiveness Framework to empirically analyze some team outcome factors. Result showed that when project team trust is high, this will improve project performance, team satisfaction, team effectiveness and team cohesion. At the same time, strong team cohesion also increases team satisfaction. However, strong team cohesion is not predicting project performance and team effectiveness positively. On the contrary, strong team cohesion is actually deteriorating the project performance. The intervention of team satisfaction can improve project performance and team effectiveness. Insignificant relationship between team effectiveness and project performance suggests that team effectiveness alone cannot predict project performance directly. Discussion, conclusion and limitations are also included in this article.

Key words: Performance Outcomes, Team Attitudinal Outcomes, Team Behavioural Outcomes, Project Performance, Team Outcome Factors, Team Trust, Team Cohesion, Team Satisfaction, Team Effectiveness, Project Manager, Project.

1. Introduction

Today more and more organizations are using project teams to deliver products or services as

well as resolving problems especially on complex tasks. This is because project performance through team is more rewarding than individual performance as the team outcomes exceed the sum of individual outputs. The rationale to study project performance is projects require a lot of financial investments and resources yet there are many project failures, delays or costs over run (Collyer, 2000; Peled, 2000; Standish Group International, 2009; Asian Development Bank, 2010). The negative project performance as mentioned above has chain effect which even costs more to an organization. These include: problems streamlining operations, problems optimizing services or products development, delaying speed to market, disruption to customer services, weaken the organization's market shares, losing to competition and much more.

Among people, processes and tools (inclusive technologies), people is the most critical success factor in influencing project performance (Kerzner, 1998; Lechler, 1998; Cooke-Davies, 2002; Thamhain, 2004; Guiney, 2009). From literature, human factors studied pertaining to project performance include: stakeholder's participation, project manager's leadership, project management practices, project organizational structure, communications and external environmental factors (Pinto & Slevin, 1986; Belassi & Tukel, 1996; Ravichandran & Rai, 1999; Dolan, 2005; Zhang & Xu, 2008).

Project performance literature is generally silent on topic related to attitudinal and behavioural outcomes or collectively termed as team outcome factors which include: team trust, team cohesion, team satisfaction and team effectiveness. Implementing a project can be risky if the team outcome factors are not understood sufficiently. Through the understanding of team outcome factors and their relationships with project performance, a project manager can lead and motivate the team better to achieve the project goals. Team outcome factors are team outputs that consists of team cohesion, team satisfaction, attitude change et al. which were derived from Gladstein's (1984) model of group behaviour. This model consists of "input-process-output" stages. Team input includes team composition and team structure whereas team process covers team communication, conflict resolution et al. (Gladstein, 1984).

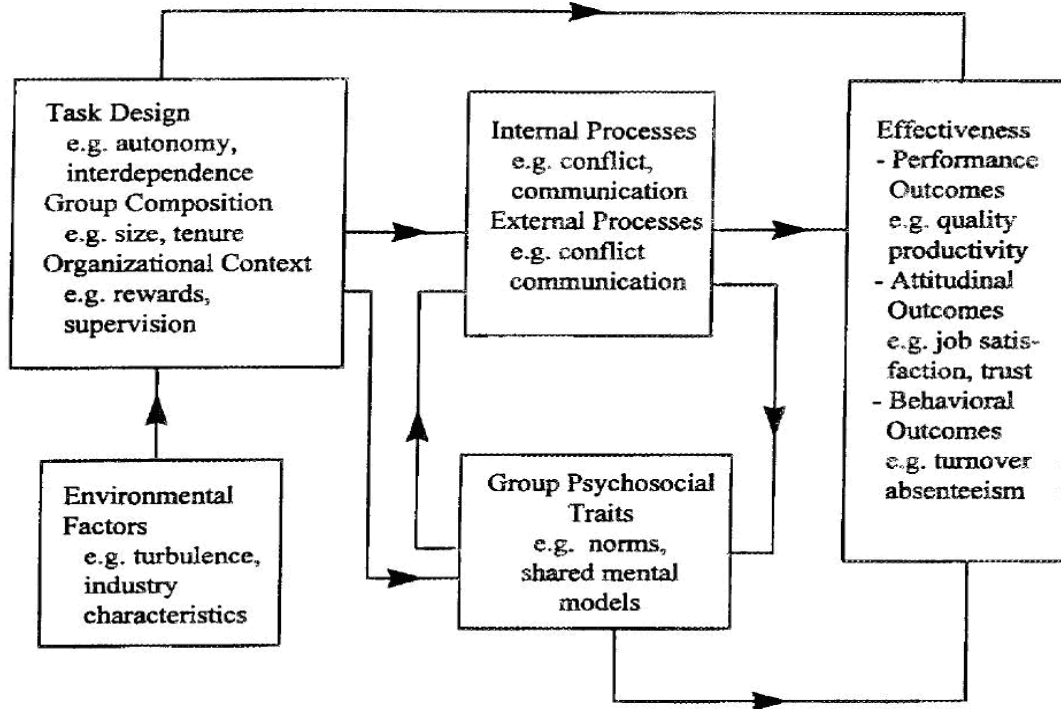
There is a need to study team trust, team satisfaction, team cohesion and team effectiveness in a project environment setting as project team is a purposive structure and usually consists of different team size, team composition and needs to achieve its project goals within certain resource and time constraints (Project Management Institute [PMI], 2008). Unlike other work teams which are ongoing and operational in nature, project's team trust, team cohesion, team satisfaction and team effectiveness might be more difficult to form or observe due to temporary nature of the project team in a multi-ethnic and multi-cultural Malaysia context.

Problem statement of this study is lack of understanding and empirical result on what are the team outcome factors that predict project performance in Malaysia context. Research objective for this study is to explore what are the team outcome factors and their relationships that predict project performance as perceived by project managers in Malaysia. Research questions for this study include: (a) What are the team outcome factors that predict project performance? (b) Which is the most significant predictor for project performance? Knowledge contribution of this study includes: (a) provides understandings on what and how team outcome factors are related to predict project performance in a Malaysia context, (b) enable management and project managers to focus on activities or tasks that can improve project's team trust, team cohesion and team satisfaction as these team outcome factors can impact the overall project performance.

2. Literature Review and Research Model

According to Cohen & Bailey (1997), team effectiveness is a function of the following four categories of factors which include: (a) environmental factors, (b) design factors, (c) group processes, and (d) group psychosocial traits. Within team effectiveness, it is divided into three major dimensions which include: (a) performance outcomes, (b) attitudinal outcomes, and (c) behavioural outcomes. Performance outcomes include efficiency, productivity, response times, quality, customer satisfaction and innovation. Attitudinal outcomes are team outcome factors that cover employee satisfaction, commitment and trust in management. Lastly, behavioural outcomes include absenteeism, turnover and safety. Following Figure 1 depicts the Cohen & Bailey's (1997) Team Effectiveness Framework.

Figure-1. Cohen & Bailey's (1997) Team Effectiveness Framework



Even though performance, attitudinal and behavioural outcomes are within team effectiveness but from literature, there is lack of research on how attitudinal and behavioural outcomes influence performance outcomes. Hence, it is the intent of this study to do so and the conceptual framework developed within this study is underpinned on Cohen & Bailey's (1997) Team Effectiveness Framework. Dependent variable in this study is project performance which is derived from the above performance outcomes. Independent variables are team outcome factors which consist of both attitudinal and behavioural outcomes that include: (a) Team Trust, (b) Team Satisfaction, (c) Team Cohesion, and (d) Team Effectiveness. Both team trust and team satisfaction are examples of attitudinal outcomes whereas team cohesion and team effectiveness are instances of behavioural outcomes (Quick & Nelson, 2009).

2.1 Project Performance

Project performance in this study is based on Stakeholder Requirement Theory which is defined as *the degree of project delivery that meets stakeholders' requirements on a negotiated time, within negotiated budget, meeting specific quality requirements and accepted by customers* (Gallegos et al., 2004; Shenhar, 2004; Parsons, 2006). Project performance is used instead of project success because project performance only encompasses the stages of planning, production and then handover as indicated by Munns & Bjeirmi (1996) in their stage two to four of project lifecycle. On the other hand, project success refers to all the six stages from conception, planning, production, handover, utilization to close down. Also according to Pinto & Slevin (1988), project performance is only subset of project success in which project success also incorporates time, budget, scope, satisfaction, welfare of client, technical and organizational validity as well as contribution to organizational effectiveness. According to Bissoonauth (2002), affective commitment, perceived organizational support, technological support and perceived benefits were important factors that had influenced project performance among virtual teams. According to Parker & Skitmore (2005), members' turnover events had disrupted and negatively affected project performance. However, there is still lack of research on how team trust, team cohesion, team satisfaction and team effectiveness can directly or indirectly predict project performance in Malaysia.

2.2 Team Trust

In this study, **Team Trust** is defined as a project manager's perception on the willingness of a team member (e.g. named A) to be vulnerable to the actions of other team members based on the expectation that the other team members will perform a particular action important to the trustor (i.e. A), irrespective of the ability to monitor or control of the other team members (Mayer et al., 1995). According to Ring (1996), successful trust experience can encourage project team members to collaborate, network and innovate. Also according to Cook et al. (1997), when trust increases it will promote sharing of more personal information among team members. This will increase interaction patterns, improve problem solving and productivity. Trust is even more important to project managers as they try to motivate team members to accomplish their tasks and achieve the project goals. According to Pinto (2007), trust is a common denominator for other behaviours like appreciation and cohesion. Low cohesiveness is associated with lack of trust in newly formed teams (Yukl, 2010). According to Costa (2003), trust was associated with both perceived task performance and team satisfaction. From literature, team trust did have influence on project success in a non-Malaysia context (Mumbi, 2007). Moreover, Mumbi's (2007) research was focusing on virtual team trust in which team members were working from dispersed locations whereas this study intends to cover both virtual and collocation teams within Malaysia. Trust in team member significantly impacts on both team performance and collective efficacy (Chuang et al., 2004). Also according to Chuang et al. (2004), leadership style has significant indirect effects on both team performance and collective efficacy via trust in team member. Webber (2008) also postulated that client trust in project manager did influence team trust, team cohesion and team performance. Nevertheless, there is still lack of research on how team trust within the project team can predict project performance, team satisfaction, team effectiveness and team cohesion in Malaysia context. Hence, following hypotheses are proposed:

H1: Team Trust can positively predict Project Performance

H2: Team Trust can positively predict Team Satisfaction

H3: Team Trust can positively predict Team Effectiveness

H4: Team Trust can positively predict Team Cohesion

2.3 Team Cohesion

Team Cohesion is defined as a project manager's perception on the degree of attractiveness of a team to its members and the closeness of the interpersonal bonds between team members (Cook et al., 1997). The more cohesive within a team, the more effective the team members will meet their needs. They will also demand better conformity from each others to meet the team's needs. Team cohesion is found to give rise to many desirable traits in groups and linked to many positive outcomes e.g. problems awareness, inclination to change, enhanced motivation, increased morale, better decision making and greater creativity (Budman et al., 1993; Chidambaram, 1996). From literature, team cohesion influenced project success (Larson & Gobeli, 1989) and team effectiveness in a non-project setting (McShane & Travaglione, 2003). According to Cook et al. (1997), Robbins & Judge (2008) and Quick & Nelson (2009), high team cohesion will have positive impact on non-project team's productivity, job satisfaction and growth. High cohesive teams also tend to have more uniform or standard output among its team members as they adhere closely to the production norms. Moreover, knowledge sharing behaviour mediates the relationship between team cohesion and individual performance (Woerkom & Sanders, 2009). However, it is not clear whether team cohesion also predict project performance, team effectiveness and team satisfaction in a project setting whereby project resource and duration are the constraints. Thus, the fifth to seventh hypotheses of the study are:

H5: Team Cohesion can positively predict Project Performance

H6: Team Cohesion can positively predict Team Effectiveness

H7: Team Cohesion can positively predict Team Satisfaction

2.4 Team Satisfaction

Team satisfaction is defined as *a project manager's perception on how team members feel about events within the project team which includes satisfaction with project works, satisfaction with team members and satisfaction with being part of the project team* (Dailey, 1993; Nguyen et al., 2008). This definition is derived from Vroom's (1964) definition of job satisfaction which refers to a worker's affective orientation towards his or her work roles. According to Parker & Case (1993) and Quick & Nelson (2009), job satisfaction reflects an employee's overall predisposition towards work and the organization. Employees with positive attitudes are often productive workers. An attitude is an expression of feelings about people, objects, activities and events (Parker & Case, 1993; Quick & Nelson, 2009). Poor attitudes can cause employees to work less effectively and in extreme cases can lead to sabotage or undermine certain processes and systems. Job satisfaction level can be important barometers of morale levels and organizational success (Parker & Case, 1993). Hence, it is important for managers to monitor these barometers. Decreasing morale and job satisfaction levels may be indications of more serious problems of unethical behaviour. Humans behave differently when progress from individual, group to organizational levels (Quick & Nelson, 2009). According to Judge et al. (2001) and Harter et al. (2002), progressing upward from individual to organisational level shows that job satisfaction is correlated with job performance. Literature also shows that team members' dissatisfaction with the organizational culture and the roles they were playing had increased turnover whereby this had also negatively impacted project performance (Parker & Skitmore, 2005). Moreover, Costa (2003) also posited that team satisfaction is strongly correlated with perceived task performance. However, it is not clear whether team satisfaction can predict team effectiveness and performance directly in a project setting whereby project resource and duration are the constraints. In this study, it is posited that team satisfaction will predict both project performance and team effectiveness. Thus, the eight and ninth hypotheses are:

H8: Team Satisfaction can positively predict Project Performance

H9: Team Satisfaction can positively predict Team Effectiveness

2.5 Team Effectiveness

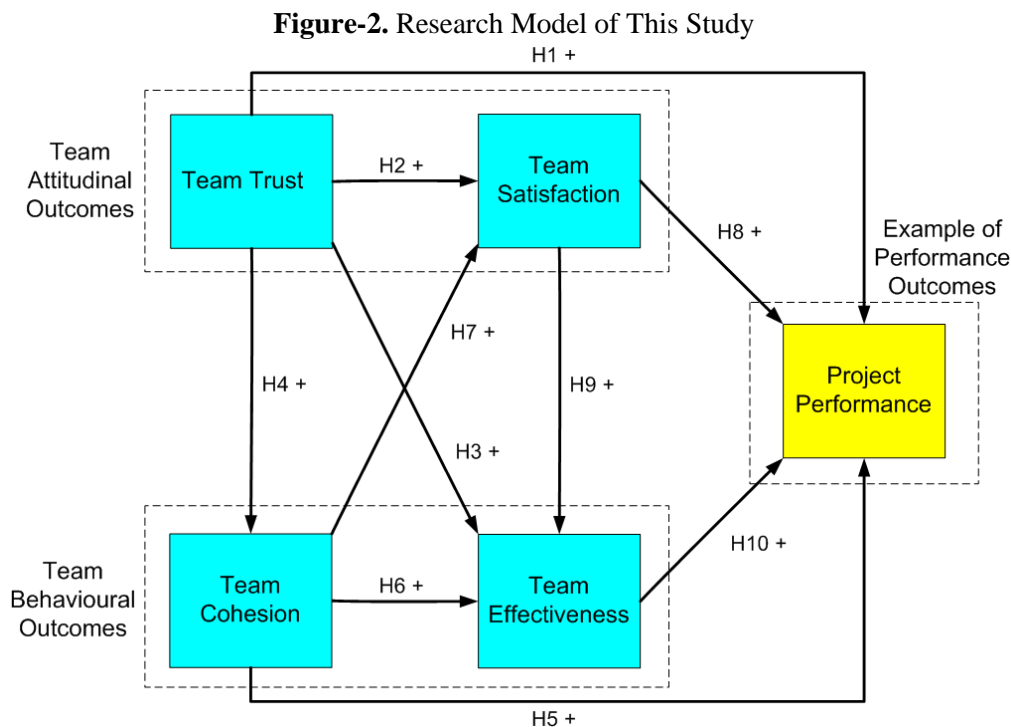
In this study, **Team Effectiveness** is defined as *the project manager's perception on team members' performance in task completion, goal achievement, empowerment, information sharing and team's ability to create and sustain a good working environment* (Bourgault et al., 2008). From literature, trust together with other factors like conflict resolution, effective interpersonal communication and leadership can influence team effectiveness (Alexander, 1985; Starcevich, 1993). There are four reasons prompting to study team effectiveness according to Hoevermeyer (1993): (a) effective team will improve job productivity and morale among team members, (b) effective team frees up manager from micro-manage day to day details so that he or she has more time focusing on other works, (c) effective team will enable team work within and between teams so that entire organization can function more effectively, and (d) effective team will improve service quality and customer satisfaction. From literature review, team effectiveness is being researched mainly as an dependent variable whereby it is influenced by independent variables like leadership roles (Duygulu & Ciraklar, 2008), team member attitude, team effectiveness perception and team environment (Finnegan, 2002), formalization, autonomy and quality of decision making process (Bourgault et al., 2008), group emotional intelligence (Aslan et al., 2008). Edmondson et al. (2003) also discovered top management team effectiveness can have direct impact on strategic leadership effectiveness whereby strategic leadership effectiveness can lead to organizational effectiveness. Nonetheless, it is not clear whether team effectiveness will influence project performance in Malaysia context which is one of the intents of this study. This is one of the gaps that this study will address. Therefore, it is hypothesized that:

H10: Team Effectiveness can positively predict Project Performance.

2.6 Research Model

The following Figure 2 illustrates the research model developed for this study. Both team trust and team satisfaction are examples of team attitudinal outcomes which are hypothesized to predict project performance. Likewise, team cohesion and team effectiveness are examples of team

behavioural outcomes which are also hypothesized to predict project performance. However, team attitudinal and behavioural outcomes are not hypothesized to predict project performance directly but rather interrelated with each other in predicting project performance via hypotheses H2, H3, H4, H6, H7 and H9 as shown in Figure 2.



3. Methodology

3.1 Procedure and Sample

Based on the deductive research question of this study, cross sectional quantitative research with online survey method was used. Emails embedded with questionnaire’s hyperlink were sent out to all the 420 target respondents (project managers) from Project Management Institute (PMI) Malaysia Chapter. PMI Malaysia Chapter is a premier representative body of project management in Malaysia and it has the national e-mailing list of experienced and certified project managers. PMI is a global not-for-profit association for project management professionals that have presence in many countries including Malaysia. PMI has over 350,000 members worldwide and it was established in 1969 with headquarter outside Philadelphia, USA (PMI, 2008). Reasons to use responses from project managers instead of project team members are: (a) there is a bias view from team members whereby team members attribute negative project outcome to external factors while attributing success to themselves (Standing et al., 2006), (b) team members do not have vested interest in project performance compare to project manager whereby project manager normally adopt a more balanced view which attributes success to external factors and only partially to themselves, while also assume significant personal responsibility for project team failure or any negative outcome (Standing et al., 2006), (c) unlike concentrated project manager’s community whereby collecting data from previous project team members is challenging as more tedious efforts are required to track them. Moreover, this may not be feasible as they may have been disbanded, not contactable or too busy being involved in other projects (Webber, 2002).

Out of the total 420 respondents, only 48% had responded with useable sample of 201. Sample’s margin of error at 95% confidence is 6.9% based on the formula $0.98/\sqrt{n}$ whereby “n” is the sample size i.e. 201. Among 201 respondents, 79% (159) of them were male and 81% (162) of them aged between 30 and 49 years. Sixty two percents of the respondents had more than 10 years project management experience and 93% of them hold a Bachelor or higher degrees. Sixty one percents of respondents were in firms with more than 500 employees. Ninety six percents of the respondents were

project managers, the balance 4% consisted of project sponsor, quality manager, purchasing director and support manager who were involved in project management. In the online survey, respondents were requested to fill up the questionnaire based on a project that they had completed recently, regardless whether the project outcome was positive or negative. More than half of the projects completed were in chemical / petroleum, construction, financial and information communication technology (ICT) industries and cost more than Ringgit Malaysia five million each. Eighty two percents of the projects took less than two years to complete and each project has an average of 10 team members.

3.2 Constructs’ Measurement

The following Table 1 depicts the measurement of all the constructs used in this study:

Table-1. Sources of Constructs

No.	Construct	Item Quantity	Scale	Measuring Instruments
1.	Project Performance	8	7 pt-Likert	Adapted from Pinto & Slevin (1986) and Mumbi (2007)
2.	Team Trust	8	7 pt-Likert	Adapted from Pearce et al. (1992)
3.	Team Cohesion	8	7 pt-Likert	Adapted from Short et al. (2005)
4.	Team Satisfaction	7	7 pt-Likert	Adapted from Job Descriptive Index (JDI) by Smith et al. (1969)
5.	Team Effectiveness	20	7 pt-Likert	Adapted from Hoevemeyer (1993)

All constructs were measured using Likert scales (ranging from 1 to 7) with anchors ranging from “Strongly Disagree” to “Strongly Agree”.

4. Results

4.1 Reliability and Validity

Albeit Cronbach’s Alpha is widely used as an estimator for reliability tests, it has been criticized for its lower bound value which underestimates the true reliability (Peterson & Kim, 2013). Composite Reliability can be used as an alternative as its composite reliability value is slightly higher than Cronbach’s Alpha whereby the difference is relatively inconsequential (Peterson & Kim, 2013). In this study, Composite Reliability and Cronbach’s Alpha for all constructs were above 0.7 which indicated that there was high reliability (see Table 2). Convergent validity was assured in the study because the Average Variance Extracted (AVE) for each construct was larger than 0.5. In Table 3, correlation between pairs of constructs was below 0.9 and the square roots of AVEs (highlighted in bold) were listed in the diagonal line of the table. Except square roots of both TT’s AVE (0.78) and TC’s AVE (0.81) which were lower than TC-TT’s Correlation (0.84), generally square roots of other AVEs were higher than the correlations between constructs indicated the existence of discriminant validity.

Table-2. Reliability and Average Variance Extracted (AVE)

Construct	Composite Reliability	Cronbach’s Alpha	AVE
Project Performance	0.93	0.91	0.66
Team Trust	0.90	0.87	0.60
Team Cohesion	0.93	0.91	0.66
Team Satisfaction	0.93	0.91	0.64
Team Effectiveness	0.92	0.89	0.61

4.2 Normal Distribution

Before parametric statistics were used, a normality test was conducted on each construct to evaluate whether the data is forming a normal distribution curve. According to Chua (2008), data is normally distributed when each construct’s skewness and kurtosis magnitude is less than 1.96. Table 4 depicts both the skewness and kurtosis information for all the constructs.

Table-3. Descriptive Statistics, Correlations and Square Roots of AVEs (Diagonal Line)

Construct	Mean	Std Dev	PP	TT	TC	TS	TE
Project Performance (PP)	5.81	0.82	0.81				
Team Trust (TT)	5.70	0.73	0.65***	0.78			
Team Cohesion (TC)	5.35	0.90	0.51***	0.84***	0.81		
Team Satisfaction (TS)	5.54	0.76	0.59*	0.75**	0.79***	0.80	
Team Effectiveness (TE)	5.63	0.68	0.57	0.70**	0.65	0.65*	0.78

*** p < 0.001 (2-tailed); ** p < 0.01 (2-tailed), * p < 0.05 (2-tailed)

Table-4. Skewness and Kurtosis

Construct	Skewness	Kurtosis
Project Performance	- 1.28	3.21
Team Trust	- 0.33	0.17
Team Cohesion	- 0.46	0.87
Team Satisfaction	- 1.38	6.12
Team Effectiveness	- 0.10	0.50

Magnitude of skewness and kurtosis for all constructs were < 1.96 except Project Performance and Team Satisfaction whereby their respective kurtosis was 3.21 and 6.12 indicated a distribution that was peaked or leptokurtic. The following Figure 3 and 4 show the boxplot of Project Performance and Team Satisfaction which had extreme scores (labelled with asterisk *) and outliers (labelled with circle). Nevertheless, the median (represented by each box’s horizontal line) was still positioned within the box indicated the distribution was still normal. Since all the constructs were normally distributed, parametric statistics were used.

Figure-3. Boxplot for Project Performance

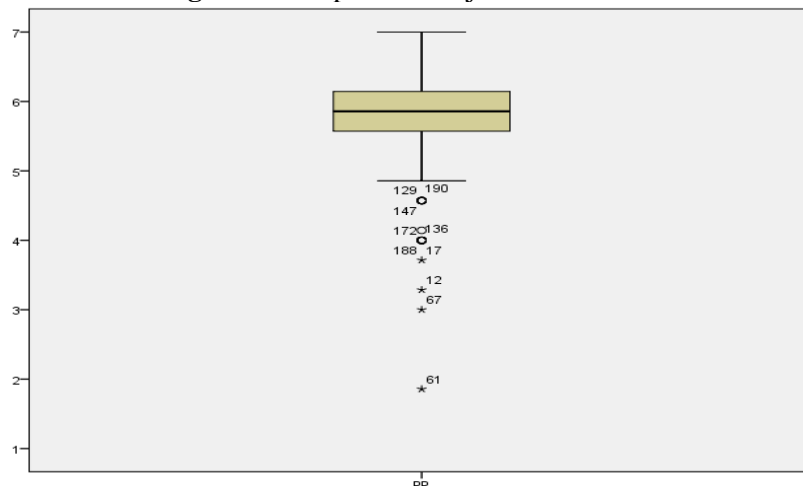
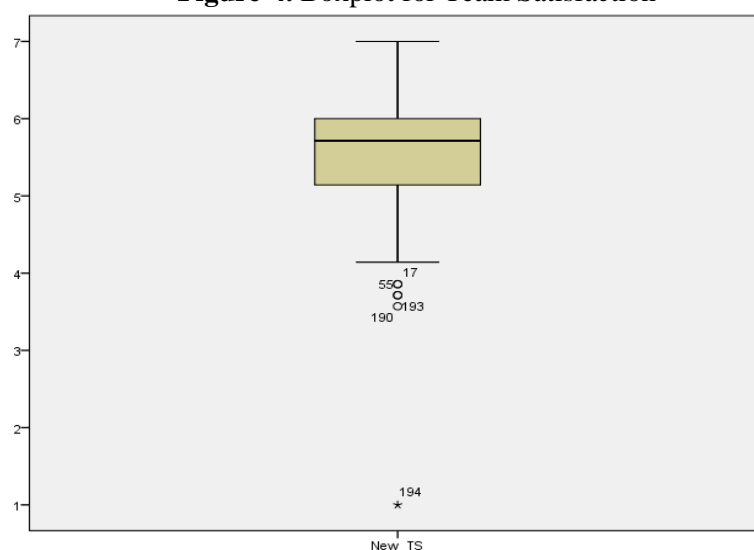


Figure-4. Boxplot for Team Satisfaction

4.3 Hypotheses Testing

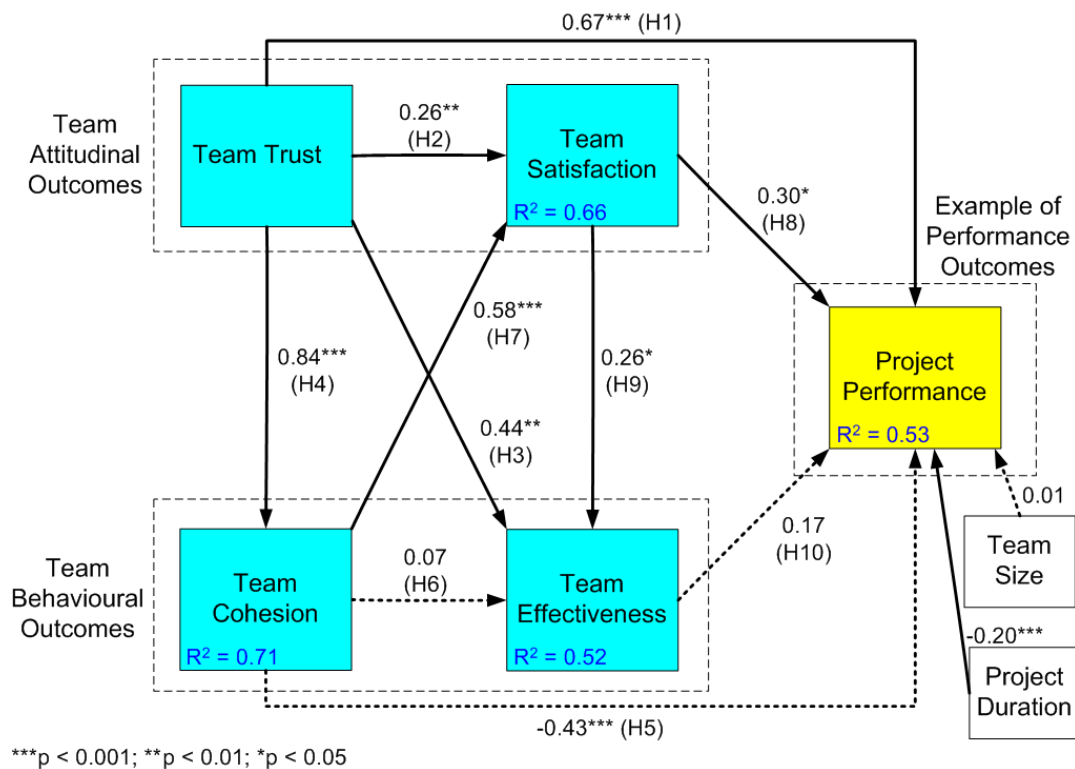
SmartPLS v2 was used to perform the path analysis. According to Hsu et al. (2007), project team size and project duration might influence project performance. In order to prevent any possible interference from demographic factors, project team size and project duration were incorporated as control variables. The analysis results were showed in Figure 5. Hypotheses H1 to H4 were supported i.e. Team Trust is positively predicting Project Performance ($b = .67, p < .001$), Team Satisfaction ($b = .26, p < .01$), Team Effectiveness ($b = .44, p < .01$) and Team Cohesion ($b = .84, p < .001$). Hypothesis H7 was also supported i.e. Team Cohesion is positively predicting Team Satisfaction as the relationship is significant ($b = .58, p < .001$). However, Team Cohesion is negatively predicting Project Performance ($b = -.43, p < .001$) and Team Cohesion does not predict Team Effectiveness directly ($b = .07, p > .05$), hence both hypotheses H5 and H6 were not supported. Hypotheses H8 and H9 were also supported i.e. Team Satisfaction is positively predicting Project Performance ($b = .30, p < .05$) and Team Effectiveness ($b = .26, p < .05$). Nevertheless, Team Effectiveness does not predict Project Performance ($b = .19, p > .05$), hence hypothesis H10 was not supported.

R^2 values for project performance, team satisfaction, team effectiveness and team cohesion were strong in this study i.e. more than 50%. 53% of the variance in project performance was explained by the influence of team trust, team satisfaction and project duration. Meanwhile 52% of the variance in team effectiveness was explained by the team trust and satisfaction. Also 66% of the variance in team satisfaction was explained by team trust and cohesion. Lastly, 71% of the variance in team cohesion was explained by team trust alone.

5. Discussion

As hypothesized, when project team trust is high, this will improve project performance, team satisfaction, team effectiveness and team cohesion. At the same time, strong team cohesion also increases team satisfaction. However, strong team cohesion is not positively predicting project performance and team effectiveness. On the contrary, strong team cohesion is actually reducing the project performance. The intervention of team satisfaction can improve project performance and team effectiveness. Insignificant relationship between team effectiveness and project performance suggests that team effectiveness alone cannot predict project performance directly.

Figure-5. Path Analysis Result



There are some lessons learnt from this study. Firstly, team trust is directly predicting project performance and team effectiveness. Hence, in order to build an effective team as well as improving the project performance, a project manager needs to develop trust among team members as well as trustworthiness with the project team.

Team trust is also directly predicting team satisfaction as evidenced in this study. Higher the team trust, higher will be the team interaction, collaboration and sharing of more information whereby these will increase the level of team satisfaction. According to Theory of Reciprocity (Falk & Fischbacher, 2000) which suggested that people will respond kindness or positive reactions when they received kind actions from the other party. People will punish or provide negative reactions when they received unkind actions from the other party. Hence, the more satisfied a project team is, team members will respond with more positive reactions like exerting more effort, improving productivity and engaging more in problem solving et al. which can significantly improve project performance and team effectiveness. Lesson learnt for a project manager is in order to make the team feels satisfied, he or she must promote team trust first within the team.

In this study, team trust is predicting team cohesion more significantly than project performance, team satisfaction and team effectiveness. This finding complements the understanding posited by Pinto (2007), Webber (2008) and Yukl (2010) that cohesion is correlates with trust. When team trust is high, project team members can interact, collaborate and share more information among themselves which in turn makes the team looks more attractive, homogeneous (similar) and capable of developing a closeness of interpersonal bonds among themselves. When this happens, team cohesion will increase. This observation is also in line with what McShane & Travaglione (2003) had mentioned that member interaction and member similarity are two of the causes for team cohesion. Even though team trust is significantly predicting team cohesion, however team cohesion is not predicting team effectiveness.

There might be reasons why team cohesion reduces project performance as well as not directly predicting team effectiveness but rather mediated by team satisfaction. According to Dailey (1993), one of the drawbacks of team cohesion is the proliferation of groupthink. When team members are too cohesive, they will voluntarily conform to established norms or behaviours within the team, regardless of whether those norms or behaviours are negatively impacting project performance or team

effectiveness. Pinto (2007) also pointed out that when some team behaviours are dysfunctional, these will render project team failure. Corrective steps need to be taken in order to address these dysfunctional behaviours which include the removal of team members from the project team. Based on this finding, a project manager needs to be cautious when a project team is too cohesive. The project manager needs to utilize all the resources at his or her disposal, including performance appraisal, recognition, reward systems et al. to induce the team to achieve project goals.

This study also shows that the more cohesive a project team, the higher will be the team satisfaction. This finding supports the same findings of Cook et al. (1997), Robbins & Judge (2008) and Quick & Nelson (2009) who had suggested that non-project's team cohesion will have positive impact on job satisfaction. When the team satisfaction is high as well as applying the Theory of Reciprocity (Falk & Fischbacher, 2000), team productivity will increase which will eventually improve project performance and team effectiveness. Since team satisfaction is predicting project performance and team effectiveness, it is important for a project manager to promote team satisfaction in his or her project team whereby he or she can do so by promoting more team trust and team cohesion.

Insignificant direct relationship between team effectiveness and project performance suggests to project manager that effective project team will not improve project performance. This finding is in line with what Edmondson et al. (2003) had discovered that non-project's team effectiveness is not impacting organizational performance but rather impacting organizational effectiveness via leadership effectiveness. There might be other constructs which are mediating or moderating the relationship between team effectiveness and project performance that warrant for further research.

The outcome of this study also enables management and project managers to focus more on activities or tasks that can improve team trust, team cohesion and team satisfaction which include team building, conflict resolution, leadership roles and team design with reasonable team size and composition. All these might directly and indirectly predict project performance and team effectiveness. With regard to the two control variables included in the research model, only project duration is negatively related to project performance. This implies that longer the project duration, project performance will be deteriorated. Hence, project manager needs to take initiative to minimize a project timeline extension. The exact role of project duration and its relationships with other constructs remain interesting research for the future.

Lastly, despite team attitudinal and behavioural outcomes are interrelated in predicting project performance; the result of this study indicates that team cohesion and team effectiveness which represent components of team behavioural outcomes are not directly and positively predicting project performance. On the contrary, increase of team cohesion can reduce project performance. Hence, other constructs within team behavioural outcomes like team conflict, absenteeism, turnover et al. can be considered in future research.

In answering the research question on what are the team outcome factors that predict project performance, this study demonstrated that team cohesion and team effectiveness did not predict project performance whereas team trust and team satisfaction were directly and positively predicting project performance. As for which is the best predictor for project performance, it can be observed from Figure 5 above that team trust with 0.67 regression weight was the best predictor for project performance.

6. Conclusion

Today, more and more project teams are formed to achieve organisational objectives as organisations generally recognized the importance and benefits of project teams. However, in order to improve project performance, management and project managers need to focus on team trust, team cohesion and team satisfaction. They need to design and deploy a series of activities or tasks that can help improve these three team outcome factors. At the same time, they need to monitor the team cohesion level as too cohesive the project team can lead to deterioration of project performance. Moreover, despite team effectiveness is contributing to organizational effectiveness, team effectiveness is not directly predicting project performance. Hence, management and project managers need to understand and differentiate the objective to achieve team effectiveness and project performance as the former will not lead to the latter.

There are limitations in this study. Firstly, qualitative interview and data analysis can be conducted with project managers to understand how and why team trust, team cohesion and team satisfaction are directly and indirectly predicting project performance as this will provide deeper insight for knowledge contribution. Secondly, this study only surveyed the views of project managers. Future study can include project team members as part of the respondents to evaluate their views as well. Thirdly, only team trust and team satisfaction were used to represent team attitudinal outcomes whereby other attitudinal outcomes like team commitment, team loyalty, team expectation et al. can be included in future research. Likewise, other team behavioural outcomes like team conflict, absenteeism, turnover, safety et al. can be included in future research instead of only team cohesion and team effectiveness. Last but not least, only team outcome factors are used to evaluate their impact on project performance whereby future studies can include other factors as specified in Cohen & Bailey's (1997) Team Effectiveness Framework e.g. design factors, team processes, psychosocial traits et al. In conclusion, this study had contributed a small step into deeper understanding on how team outcome factors are predicting project performance in Malaysia.

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