



Relationship between Team Satisfaction and Project Performance as Perceived by Project Managers in Malaysia – A Mixed Methods Study

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Abstract - The purpose of this mixed methods sequential explanatory study was to evaluate what are the team outcome factor(s) that can contribute to project performance in Malaysia by surveying 52 project managers. Later, the study continued by following up with six selected participants to investigate those positive results in more detail via an online interview. In the first phase, only one team outcome factor i.e. team satisfaction was tested significantly influencing project performance. In the second phase, multiple case studies were conducted to investigate how and why team satisfaction influences project performance whereby four major themes emerged from the “how” question and one major theme emerged from the “why” question. The findings of both phases were discussed. Limitations and future recommendation were also provided.

Keywords - Project Performance, Team Outcome Factors, Team Trust, Team Cohesion, Team Effectiveness, Team Satisfaction, Team Effectiveness Framework, Mixed Methods Sequential Explanatory Study

1. Background

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 behavioral outcomes or collectively termed as team outcome factors which include: team trust, team cohesion, team effectiveness and team satisfaction. Implementing a project can be risky if the team outcome factors are not understood sufficiently. 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 behavior. 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 cohesion, team effectiveness and team satisfaction in a project setting environment as project team is a purposive structure and usually consists of different team size, team composition and needs to achieve its project goals within a limited timeline (PMI, 2008). Unlike other work teams which are ongoing and operational in nature, project’s team trust, team cohesion, team effectiveness and team satisfaction might be more difficult to form or observe due to temporary nature of the project team.

Problem statement of this study is lack of understanding

and empirical result on what are the team outcome factors that will influence project performance especially in a multi-ethnic and multi-cultural Malaysia context. Research objective for this mixed methods sequential explanatory study is to evaluate what are team outcome factors that could contribute to project performance in Malaysia by obtaining quantitative results then follow through with a qualitative case study analysis. Research questions for this study include: (a) What are the team outcome factors that significantly influence project performance? (b) Which is the most significant predictor for project performance? (c) How those significant team outcome factors influence project performance? (d) Why those significant team outcome factors influence project performance? To answer the above questions, a mixed method research was conducted. Knowledge contribution of this study includes: (a) provides an understanding on what, how and why significant team outcome factors can positively influence project performance in Malaysia context, (b) enable management and project managers to focus on team related critical factor(s) that can significantly improve project performance among team members.

2. Literature Review and Conceptual Framework

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) behavioral outcomes. Performance outcomes include efficiency, productivity, response times, quality, customer satisfaction and innovation. Attitudinal outcomes are team outcome factors that cover employee satisfaction and trust in management. Lastly, behavioral outcomes include absenteeism, turnover and safety. Following Figure 1 depicts the Cohen & Bailey’s (1997) Team Effectiveness Framework.

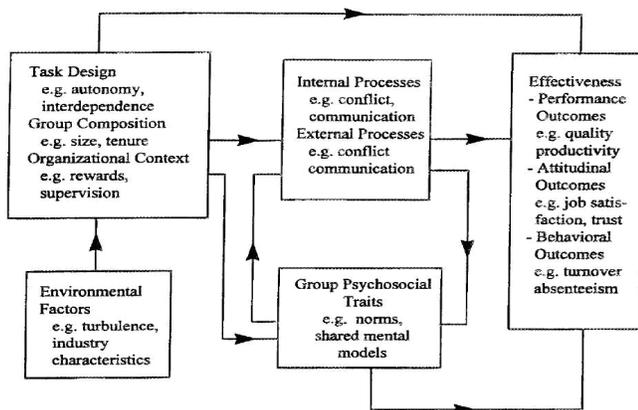


Figure 1. Cohen & Bailey’s (1997) Team Effectiveness Framework

Even though performance, attitudinal and behavioral outcomes are within team effectiveness but from literature, there is lack of research on how attitudinal and behavioral 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 behavioral outcomes that include: (a) Team Trust, (b) Team Cohesion, (c) Team Effectiveness, and (d) Team Satisfaction. Both team trust and team satisfaction are examples of attitudinal outcomes whereas team cohesion and team effectiveness are instances of behavioral 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.

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. From literature, team trust did have influence on project success in a non-Malaysia context (Mumbi, 2007). Mumbi’s (2007) research was focusing on virtual team trust in which

team members were working from different 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 will affect project performance in Malaysia context. Hence, following hypothesis is proposed:

H1: Team Trust will positively influence Project Performance.

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 and 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). According to Cook et al. (1997) and Robbins & Judge (2008), 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 behavior mediates the relationship between team cohesion and individual performance. However, it is not clear whether team cohesion also influences team performance in a project setting whereby project duration is a constraint. Thus, the second hypothesis of the study is:

H2: Team Cohesion will positively influence Project Performance.

2.4. Team Effectiveness

In this study, team effectiveness is defined as a project manager's perception on team members' performance in task completion, goal achievement, empowerment, information sharing, and team's ability to create and sustain good working environment (Bourgault et al., 2008). There are four reasons prompting to study team effectiveness according to Hoevemeyer (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:

H3: Team Effectiveness will positively influence Project Performance.

2.5. 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), 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). 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 behavior. In this study, it is posited that team satisfaction will influence project performance. Thus, the fourth hypothesis is:

H4: Team Satisfaction will positively influence Project Performance.

2.6. Conceptual Framework

After examining the literature of all the relevant constructs as posited in preceding section, a conceptual framework is developed and illustrated in the following Figure 2.

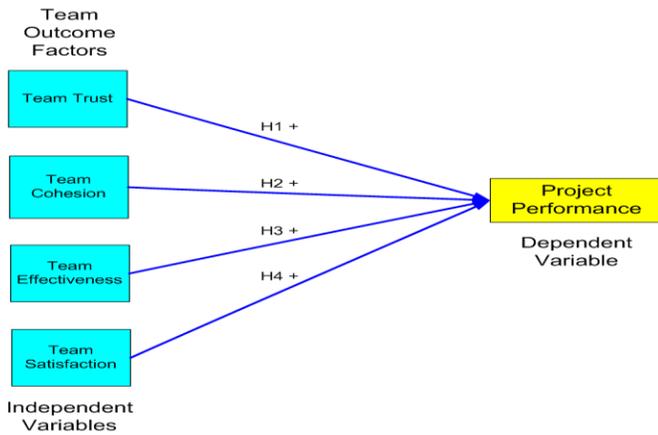


Figure 2. Conceptual Framework of this Study

3. Methodology

3.1. Study Design

In order to answer the research question in this study, a mixed method approach (Tashakkori & Teddlie, 2003) was employed. This approach consists of procedures to collect, analyze and integrate both quantitative and qualitative data in different stages of the research process in the study (Creswell, 2005). Justification to mix both types of methods and data is that neither quantitative nor qualitative methods could adequately within themselves cover the scopes and depths of the questions on “what”, “how” and “why” pertaining to team outcome factors and project performance. When combining the two, quantitative and qualitative methods complement each other and provide a holistic and in-depth view of the research problem (Green et al., 1989; Johnson & Turner, 2003; Tashakkori & Teddlie, 1998).

This study used a mixed methods sequential explanatory design which consists of two distinct quantitative and qualitative phases (Creswell et al., 2003; Tashakkori & Teddlie, 1998). Within this design, quantitative numeric data is collected and analyzed first, followed by the qualitative text data which is collected and analyzed later in sequence. The qualitative method is to explain and elaborate on the quantitative results collected in the first phase. In this study, the quantitative data is to ascertain which is / are the team outcome factor(s) that had contributed to project performance. Some respondents were then selected as participants for the second qualitative phase. Qualitative multiple case study approach was used to explain how and why some of the team outcome factors, tested in the first phase were significant predictors of the project performance.

According to Creswell (2005), both the quantitative and qualitative phases were connected in sequence when participants had responded to the qualitative case studies after interview protocol was developed based on the first phase’s statistical results. Both the quantitative and qualitative results were integrated during the outcome discussion of the entire

study. Following Figure 3 depicts the mixed methods sequential explanatory design procedures used in this study. It is adapted from Ivankova & Stick (2006).

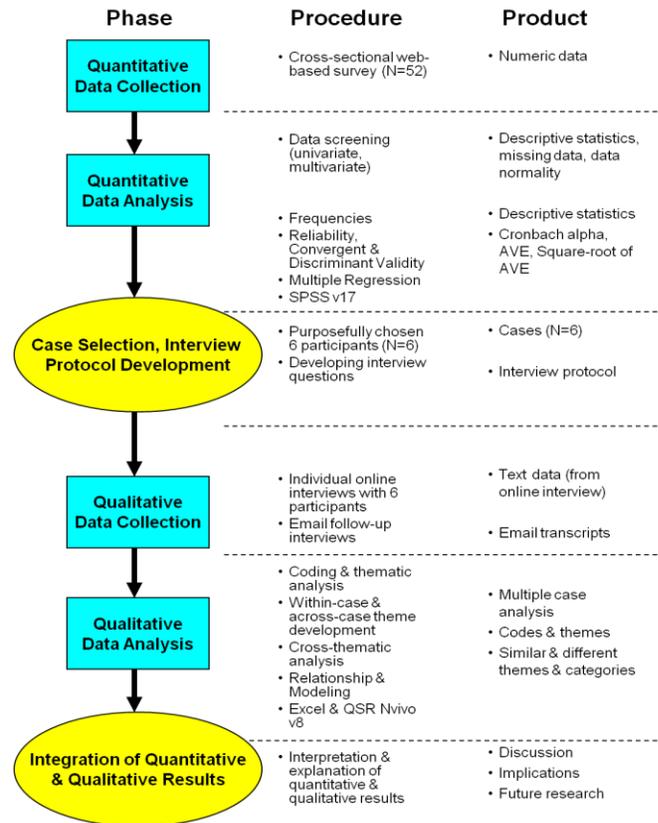


Figure 3. Mixed Methods Sequential Explanatory Design Procedures

3.2. Quantitative Phase

3.2.1. Sample and Procedure

Based on the deductive research question of this study, cross sectional quantitative research with online survey method was used. Around 500 emails were sent out to all project managers from Project Management Institute’s (PMI) Malaysia Chapter. PMI Malaysia Chapter was selected because it is a premier representative body of project management in Malaysia and it has the national emailing 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). Structured questionnaire’s hyperlink was attached within each email. When the hyperlink was clicked, it brought the respondent to a website so that the project manager can fill up the survey online. Three waves mailing was used and the survey was completed in six weeks. Only 52 respondents had responded making the useable sample of 52. Rationale using project managers instead of project team members are: (a) team members attribute negative project outcomes to external

factors while attributing success to themselves whereby there is a bias view from team members (Standing et al., 2006), (b) team members might not have vested interest in project performance compare to project manager whereby s/he normally adopts a more balanced view which attributes success to external factors and only partially to themselves, while also attributes significant personal responsibility for project failure or any negative outcome (Standing et al., 2006), (c) collecting data from previous project team members can be a challenge as tedious effort is required to track them and this may not be feasible as they had been disbanded, not contactable or too busy involve in other projects (Webber, 2002).

Among 52 respondents, 86% (44) of them were male and 62% (32) of them aged between 31 and 50. More than half (58%) of the respondents had five to 20 years of project management experience and 80% of them hold a Master

degrees. 37% of respondents were in firms with more than 500 employees. Almost three quarters (74%) of the respondents were project managers while the rest were project team leaders. In the survey, respondents were asked to refer to one project that they had completed recently disregard the outcome was positive or negative and based on that project to fill up the questionnaire. More than half of the projects completed were in construction, education, government and information communication & technology (ICT) industries and cost more than Ringgit Malaysia 5 million each. 75% of the projects had duration under two years and each project had average 20 team members.

3.2.2. Instrumentation

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

Table 1. Measures 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 Effectiveness	20	7 pt - Likert	Adapted from Hoevermeyer (1993)
5.	Team Satisfaction	7	7 pt - Likert	Adapted from Job Descriptive Index (JDI) by Smith et al. (1969)

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

3.3. Qualitative Phase

3.3.1. Qualitative Research Design

In this second qualitative phase, a multiple case study design (Stake, 1995; Yin, 2009) was adopted to collect and analyze qualitative data. The objective of using multiple cases is to enrich the first phase quantitative findings and illuminate some issues (Creswell, 2005) on how and why certain team outcome factor(s) influence(s) project performance. The unit of analysis was individual project manager who had participated in the previous quantitative survey.

3.3.2. Case Selection

All the 52 respondents who had participated in the previous quantitative survey had been emailed with a hyperlink to an online interview website. From the website, two semi-structured interview questions were asked. Initial plan was to select some cases out of the multiple responses. In reality, only six participants had volunteered to participate whereby all their data had been used in qualitative analysis.

3.3.3. Interview Protocol Development and Data Collection

The content of the interview protocol was based on the quantitative results from the first phase of the study.

Objective of the qualitative phase was to explore and enrich the results of the statistical tests (Creswell & Plano Clark, 2011). Quantitative statistical results showed that only Hypothesis 4 was accepted. Hence, there is a need to further understand how and why team satisfaction influences project performance. Two semi-structured interview questions were asked i.e. (a) How project team satisfaction influences project performance? (b) Why project team satisfaction influences project performance? The interview protocol was pilot tested by interviewing one participant who was selected from those who had completed the online survey in the first phase of the study. The pilot test participant was not one of the six participants that had responded later. Non-significant independent variables or team outcome factors (i.e. team trust, team cohesion and team effectiveness) were excluded from subsequent qualitative study. This is due to time constraint as well as focusing the limited resource to perform in depth qualitative investigation to understand deeper how and why team satisfaction had influenced project performance.

3.3.4. Qualitative Analysis

Online interview was conducted by letting the participants to click on the hyperlink within the email they had received. After reading those online questions, they can take time to understand and think of an answer before typing into the online interview form and submit. Since it was an online interview, audio recording was not required and hence no verbatim transcription was needed. Qualitative analysis was

conducted in two stages: within each case and across the cases (Stake, 1995; Yin, 2009) using Excel and QSR NVivo 8. NVivo 8 as the qualitative software can perform data storage, coding, theme development, relationship linking and model generation. Steps in qualitative analysis included: (a) reading through all the answers for all the cases downloaded from online interview website; (b) coding the data by segregating and labeling the text into sub-categories and categories; (c) verifying the codes through inter-coded agreement check; (d) using codes to develop themes by aggregating similar codes together; (e) connecting and interrelating those themes; (f) constructing case study narrative comprising descriptions and themes; and (g) cross case thematic analysis. Credibility of the findings was supported by triangulating from different cases, inter-coder agreement, rich and thick description of cases, and reviewing by an academic advisor (Creswell & Plano Clark, 2011).

4. Results

4.1. Quantitative Phase

4.1.1. Reliability and Validity

Cronbach’s Alpha for all constructs were above 0.7 which indicated there was high reliability (see Table 2). Convergent validity was assured in the study because correlation between indicators in the same construct was high and 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 squared roots of AVEs were listed in the diagonal line of the table. Except squared roots of both TT’s AVE (0.82) and TC’s AVE (0.79) which were lower than TC-TT’s Correlation of 0.84 as well as squared root of TC’s AVE (0.79) which was the same as TS-TC’s Correlation (0.79), generally squared roots of other AVEs were larger than the correlation between constructs indicated the existence of discriminant validity.

Table 2. Reliability and Average Variance Extracted (AVE)

Construct	Cronbach’s Alpha	AVE
Project Performance	0.94	0.70
Team Trust	0.87	0.67
Team Cohesion	0.91	0.63
Team Effectiveness	0.94	0.62
Team Satisfaction	0.92	0.72

Table 3. Mean, Standard Deviation, Correlation between Constructs and Squared Roots of AVEs (Diagonal Line)

Construct	Mean	Std Dev	PP	TT	TC	TE	TS
Project Performance (PP)	5.75	0.97	0.84				
Team Trust (TT)	5.77	0.79	0.65**	0.82			
Team Cohesion (TC)	5.44	0.89	0.74**	0.84**	0.79		
Team Effectiveness (TE)	5.83	0.62	0.57**	0.77**	0.77**	0.79	
Team Satisfaction (TS)	5.67	0.77	0.81**	0.66**	0.79**	0.77**	0.85

** : Correlation is significant at the 0.01 level (2-tailed)

4.1.2. 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. Since all the constructs are normally distributed, parametric statistics were used.

Table 4. Test of Normality

Construct	Skewness	Kurtosis
Project Performance	- 0.95	0.58
Team Trust	- 0.03	- 0.50
Team Cohesion	0.10	- 0.72
Team Effectiveness	0.24	0.27
Team Satisfaction	- 0.14	- 0.09

4.1.3. Hypotheses Testing

Statistical Package for Social Science (SPSS) v18 was used to perform multiple regression analysis. The results were shown in Figure 4. Team Trust, Team Cohesion and Team Effectiveness were not influencing Project Performance. Hence, hypotheses H1, H2 and H3 were rejected. Hypothesis H4 was supported i.e. Team Satisfaction was influencing Project Performance as indicated by the standardized coefficient of 0.81 (significant $p < 0.01$). Also from Figure 4, Team Satisfaction accounts for 64% of variation in Project Performance as indicated by the adjusted R^2 (0.64).

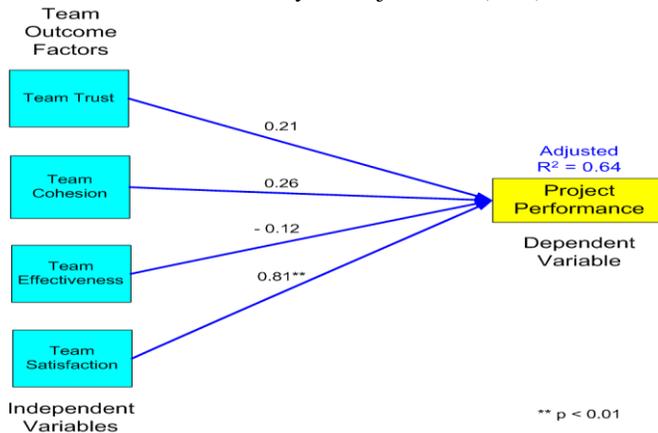


Figure 4. Conceptual Framework of this Study

4.2. Qualitative Phase

Six project managers were asked to relate their perception on how and why project team satisfaction influences project performance. Each project manager represented one case study whereby analysis of each case and across six cases yielded four themes related to how team satisfaction can influence project performance. One theme and four sub-themes emerged from the question on why team satisfaction can influence project performance. The description of each question and answers are as follows.

4.2.1. How Team Satisfaction Influences Project Performance?

Team Stakeholdership

Project team satisfaction can influence project performance through stakeholdership. Project manager together with other project team members are part of stakeholders of the project performance. In project context, stakeholders are people or organizations inclusive project manager, team members, customers, sponsors, performing organizations, general public et al. who are involved in the project that can exert influence over the project or their interests can be affected by the project performance (PMI, 2008). Stakeholder theory was originated from the study of organizational management and ethics (Phillips et al., 2003). Stakeholder theory suggests that managers must pay attention to all constituencies as they can affect the value of the organization (Jensen, 2010). When the project team members are more satisfied, their stakes increased that will motivate them further to achieve the desire project performance. Just as one project manager A noted:

"I think it is very natural for every project team member to see the team succeed because each of them is the stakeholder of the project deliverables. If the project not delivered successfully, this will look bad not only to the team but also to each of them. Since each (team member) has a stake, they have no choice but to perform their role or portion of work well. But at the same time if the team feels more satisfied, they will produce more or help out each other to deliver the project performance as needed"

Team Proactiveness

When project team members are more satisfied, this will motivate the team to be more proactive in performing their tasks to meet the desired project performance. Some project managers also commented that dissatisfied team members normally will perform badly or passively just to meet delivery expectation without focusing on the work quality. For example, project manager C commented the following:

"Those who are dissatisfied, raise their concerns only when asked to deliver their tasks... Those who are resistant, less cooperative are seen to be performing poorly"

Team Resourcefulness

According to some project managers' feedbacks when team members are more satisfied, they will allocate more time and resources to complete the tasks assigned. For example, project manager D stated: "... with team satisfaction, team members will be more committed to allocate time and resources to complete the assigned tasks". Team resourcefulness is expressed by team members who have been motivated to help others and can go beyond the normal expectation of their work. As they are more satisfied, they are willing to go beyond their call of duty to help other project team members to meet overall project performance.

Team Willingness to Negotiate

Some project managers commented that when project team members are more satisfied, they are more willing to listen and engaged in negotiation initiated by the project manager. This is visible especially when changes are happening and impacting the project progress. In project manager context, negotiation is a means to confer with various parties with shared and opposed interests with an objective to compromise or reach an agreement (PMI, 2008). Also according to PMI (2008), negotiation is a skill that is an integral part of project management in which when performing well will improve the project performance. To negotiate successfully, project team members also need to perform well in listening and articulating their thoughts whereby the more satisfied they are, they can negotiate better with the project manager. According to Fisher & Davis (1993), when emotions like anger, hostility, pride or dissatisfactions overwhelm project team members or project manager's rationality, both parties need to withdraw from the situation in order to avoid negotiation failure. For example, as project manager F pointed out: "... when a project team is already in conflict, it is too late for me to bargain and negotiate with the team to meet project timeline".

Following Figure 5 summarized the qualitative findings on how team satisfaction influences project performance.

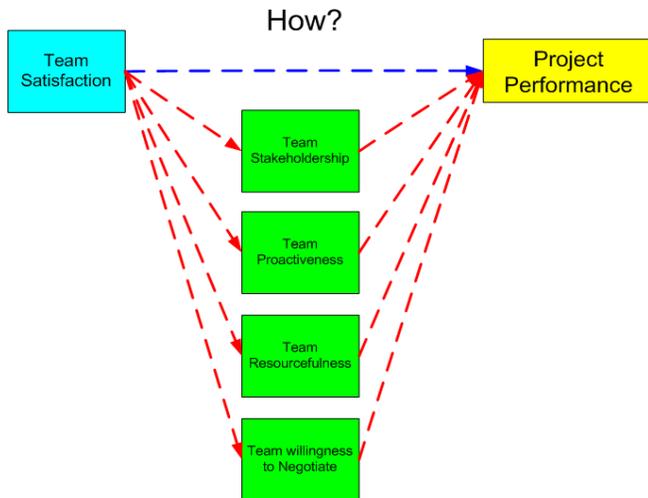


Figure 5. Findings on How Team Satisfaction Influences Project Performance

4.2.2. Why Team Satisfaction Influences Project Performance?

Gratitude Showing

After data is collected on this question as well as qualitative analysis was completed, one central theme emerged explaining why team satisfaction influences project performance. The central theme is called gratitude showing whereby it will trigger other themes to emerge which includes improved morale, increased responsibility, putting in extra effort and quality of work. Gratitude showing is the main reason explaining why the more satisfied the project team, the better they will improve the project performance. As project manager A stated:

“... when you feel satisfied and happy which may due to the utility (benefits) of the team contributed to you, naturally you will show gratitude and appreciation in which one of them might be you will do your best and work extra mile (effort) in order to help the project team to succeed... when you feel satisfied and happy due to others contributed to your utility (benefits) i.e. enjoyment or good feeling, you will in return will think of give back...”

The above depiction is in line with the Theory of Reciprocity (Falk & Fischbacher, 2000) which stated that people will respond kindness or positive action when they received kind actions from the other party. People will punish or provide negative action when they received unkind actions from the other party. Also according to Robbins & Judge (2008), satisfied workers tend to go beyond the call of duty as they wish to reciprocate their positive experiences. Hence, gratitude showing from team members will enable them to repay positive actions to the project team that had caused them felt satisfied. Through their positive reactions which include improved morale, increased responsibility, putting in extra effort and quality of work, these can improve the entire project performance.

Improved Morale

When the team is more satisfied, team morale will improve and project manager can easily lead the team to achieve the project performance. On the contrary, when the team is dissatisfied, team morale will drop low whereby this will negatively affect project performance as described by project manager D:

“Project team satisfaction is important as the morale of the entire team will be affected if one or two team members failed to complete their assigned tasks on time and with quality output”

The above finding is consistent with what Johns (1996) had commented whereby decreased morale of workers will shift their loyalties and make them feel less attached to their employers, and when this happen it can impact the work quality.

Exert Extra Effort

An example showing project team members putting in extra efforts can be exemplified from project manager A’s response:

“team satisfaction can improve the project performance because as the team is satisfied or happy, they will deliver more and work extra mile or extra hard even though some of the works are beyond their scope or beyond their limit e.g. time to go off or beyond the workload they should be handling”

Quality of Work and Increased Responsibility

Another example showing project team members had improved their quality of work and increased their responsibility can be extracted from project manager B’s response:

“The project team is satisfied hence leading to better project team performance with lesser errors, lesser ‘half-cooked’ work, more ownership and responsibility to ensure that the work is completed on timely manner and within the budget”

In summary, Figure 6 parsimoniously synthesizes the qualitative findings on why team satisfaction influences project performance.

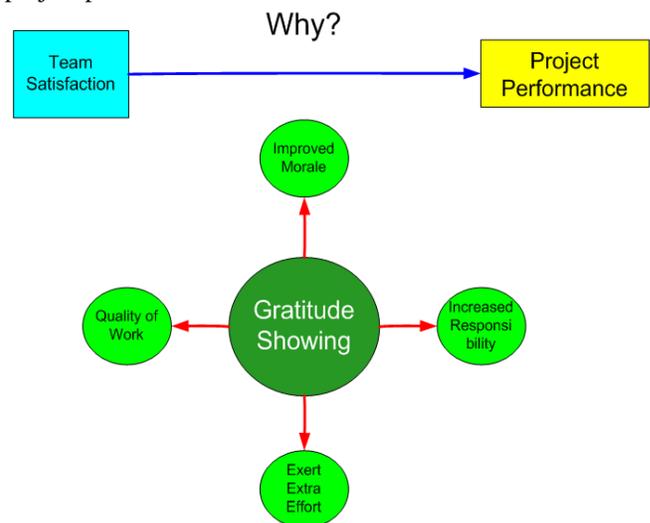


Figure 6. Findings on Why Team Satisfaction Influences Project Performance

5. Discussion

Insofar, the quantitative findings in this study found that only team satisfaction influences project performance. Also from the qualitative findings, several factors and reasons were explaining how and why team satisfaction influences project performance. Out of the four hypotheses tested in quantitative analysis, only hypothesis H4 was accepted. As hypothesized, when a project manager can develop and maintain his or her project team satisfaction, this will positively influence the project performance. This finding concurred with the studies conducted by Judge et al. (2001) and Harter et al. (2002) whereby moving from individual to organizational level, there is a strong indication showing job satisfaction is correlating with job performance.

On the contrary, insignificant relationship between respective team trust, team cohesion and team effectiveness with project performance suggests that they have not directly influenced project performance in this study. As such, there are some lessons learnt from these insignificant relationships. Firstly, the finding of insignificant relationship between team trust and project performance in this study presents somewhat different results from previous studies i.e. trust improves team performance (Cook et al., 1997; Chuang et al., 2004) and team trust influences virtual team project success (Mumbi, 2007). Whereas for insignificant relationship between team cohesion and project performance, current study's finding is also different from previous study i.e. team cohesion influences project success (Larson & Gobeli, 1989). Lastly, the finding of insignificant relationship between team effectiveness and project performance in this study also incongruence with what Edmondson et al. (2003) had discovered whereby top management's team effectiveness can indirectly impacting organizational effectiveness.

The insignificant relationships in this study might due to the reason that project team is different from other ongoing work or management teams whereby project is a temporary endeavor (PMI, 2008) i.e. average less than two years in this study. There is a possibility that team trust, team cohesion and team effectiveness takes longer time to develop compares to team satisfaction. Even though both studies were related to project, however project duration was longer for those studies involved project success (Mumbi, 2007; Larson & Gobeli, 1989) compared to this study that was focusing on project performance (Munns & Bjeirmi, 1996). There is also a possibility that a project may be formally completed but the project team is still stagnated in storming stage of team development (Tuckman & Jensen, 1977) whereby this will cause the team members could not nurture team trust, team cohesion and team effectiveness to produce positive project performance. Figure 7 below showing this occurrence when both project lifecycle phases (PMI, 2008) and team development stages (Tuckman & Jensen, 1977) are put together. This is also evidenced by one project manager F that had mentioned: "... during end of execution and closing state of the project, the team was still in storming period".

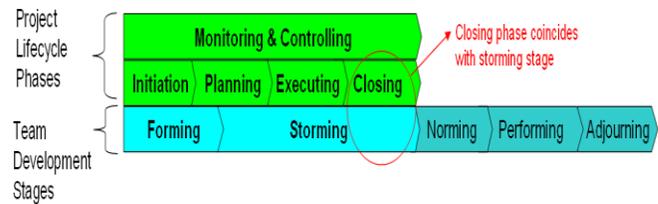


Figure 7. Project Lifecycle Phases (PMI, 2008) vs Team Development Stages (Tuckman & Jensen, 1977)

Another possibility can due to the abnormal Punctuated Equilibrium Model (Gersick, 1988) whereby the project is completed within deadline set but project performance achieved is much lower than initially expected. Figure 8 below illustrated this abnormality happening.

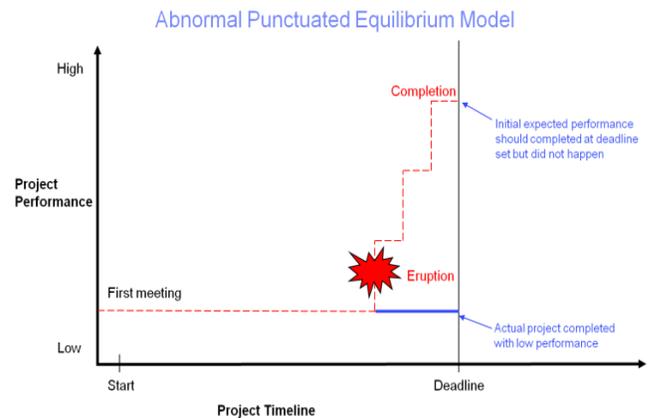


Figure 8. Abnormal Punctuated Equilibrium Model, adapted from (Pinto, 2007)

Gersick's (1988) normal Punctuated Equilibrium Model states that project team development, instead of changing slowly as in steady state, it can go for long time without change since the first meeting (see the dotted line) until suddenly massive changes like eruption can happen that drive the team to complete their work with high performance and meeting the deadline ("dotted stair-case" line reaches completion to meet the deadline). According to Pinto (2007), the sudden eruption changes can due to project team dissatisfaction over the slow progress, interpersonal conflicts or some external factors or intervention which can serve as motivation to revise team norms, team trust, team cohesion, team effectiveness, development of better intra-team processes et al. to improve the overall project performance. Abnormality happens when a project team is progressing in the timeline without any change till deadline completion (see Figure 8's continuous horizontal line). There is no sudden eruption change to improve the overall project performance. This phenomenon can help explain why individually team trust, team cohesion and team effectiveness is not significantly influencing project performance.

Large team size can be another reason causing the insignificant relationships. Larger the size e.g. average 20 members per project team in this study might delay the team to move quickly from storming to norming stage of team development. Team size depends on the scope of work and amount of coordination required among team members

whereby some scholars recommended team size should be less than 10 (McShane & Von Glinow, 2008). Reason being larger the team it is less effective as they take more time and effort to coordinate their roles and minimize their differences. Project complexity can be another reason whereby the more complex is a project e.g. measured by average Ringgit Malaysia 5 million per project in this study might require more effort and time to achieve an effective team with team trust and team cohesion. From literature, there are associations among team trust, team cohesion and team effectiveness (Pinto, 2007; Robbins & Judge, 2008) but there is still lack of known association of the former three with team satisfaction in a project setting. This implies that insignificant relationships among team trust, team cohesion and team effectiveness with project performance can be different from the relationship between team satisfaction and project performance.

Based on the outcome of this study, it is recommended that project managers need to demonstrate his or her leadership skills and initiating team building activities to strengthen team shared mental models among project team members. When team members are sharing the common mental models, the team members can quickly understand each other and coordinate better, build up team trust, improve team cohesion and form an effective team. These can improve overall performance before the project deadline is approaching or quickly move away from storming to norming or performing phases. Moreover, the team size should keep to minimum number of members yet capable to coordinate and perform the scope of work required. For complex projects, project manager needs to put in more effort and resources to plan and manage by involving all team members in the project team. Doing this will break the complex project into manageable deliverables and let the team members as stakeholders to own and responsible for their portion of work.

In the second phase of qualitative study, a multiple case study analysis had delved into the factors explaining how team satisfaction influences project performance whereby following themes had emerged: team stakeholdership, team proactiveness, team resourcefulness and team willingness to negotiate. Prerequisite for the emergent of the above factors is to ensure team satisfaction is developed and maintained. These factors can be mediators mediating the relationship between team satisfaction and project performance whereby further empirical quantitative study might be required. According to Pearce (1982), contribution of team members as stakeholders within the project team is to offer their skill and expertise to achieve the desired project performance. Inducement to contribute from team members includes: wages, bonuses, stable employment and promotion which are similar to individual factors that motivate job satisfaction. Hence, satisfaction is associates with stakeholdership which can subsequently improve project performance. Emerging of team proactiveness from team satisfaction helps explain three out of four proactive drivers of Four-Drive Theory (Lawrence & Nohria, 2002). This theory indicates that motivation of oneself is based on his or her innate drives to acquire, bond, learn and defend either physical or social objects like

possessions, experience, relationships, knowledge, safety et al. The drives to acquire, bond and learn are three proactive drivers that can motivate team members to behave in certain manners to achieve project performance. In summary, findings of the above four factors i.e. team stakeholdership, team proactiveness, team resourcefulness and team willingness to negotiate are consistent with Organizational Citizenship Behavior as mentioned by Podsakoff et al. (1993) whereby satisfied worker tend to give back more to the organization beyond their call of duty which includes helping other co-workers, making suggestions for innovations, proactively developing their skill et al.

The qualitative findings also revealed reasons why team satisfaction influences project performance. These include themes like gratitude showing, improved morale, increased responsibility, putting in extra effort as well as quality of work which had emerged from this study. Gratitude showing which is supporting the theory of reciprocity (Falk & Fischbacher, 2000) is the main reason explaining how other subsequent reasons are emerged. Without gratitude showing, achievement of project performance may not be possible as team members might just keep the satisfaction within themselves without contributing to the project performance. It is interesting to note that through the second phase (i.e. qualitative approach) whereby answers were solicited from project manager themselves, this study deepen our understanding on the motive why team satisfaction influences project performance. In summary, these two qualitative findings (the how and why) emphasize the importance to cultivate team satisfaction within a project team in order to meet the positive project performance.

In order to answer the research questions on “what are the team outcome factors and the best predictor in influencing project performance?” seems to indicate that the only predictor is team satisfaction. Secondly, team stakeholdership, team proactiveness, team resourcefulness and team willingness to negotiate are the answers for the research question “How team satisfaction influences project performance?” Lastly, gratitude showing, improved morale, increased responsibility, putting in extra effort and quality of work are the answers to address why team satisfaction is positively influencing project performance.

6. Conclusion

Today, as organizations recognized the importance and benefits of project teams, they have formed more and more project teams to achieve different organizational objectives. However, in order to ensure project teams achieving positive project performance, management and project managers need to focus on critical factors which include team satisfaction. Based on a purposive sample of 52 project managers, the empirical quantitative study had shown evidence that team satisfaction could positively influence project performance. In order to understand deeper how team satisfaction influences project performance, qualitative findings have revealed that team stakeholdership, team proactiveness, team

resourcefulness as well as team willingness to negotiate are the key enablers. Additional qualitative findings also shown that gratitude showing, improved morale, increased responsibility, putting in extra effort and quality of work are emerging reason why team satisfaction can influence project performance in Malaysia context.

Nonetheless, there are some limitations in this study. Firstly, random and more sample is needed for future study e.g. extends the online survey to project managers from different countries. Secondly, future study can include project team members as part of the respondents to evaluate their views beside what had been collected from project managers. Thirdly, only team outcome factors were used in this study to evaluate their impact on project performance whereby future study can include other factors as specified in Cohen & Bailey's (1997) Team Effectiveness Framework e.g. design factors, team processes, psychosocial traits et al. Lastly, instead of using online interview and emails, future qualitative study can include face to face interviews with participants to understand how and why individual team trust, team cohesion and team effectiveness is not influencing project performance. In conclusion, this mixed methods study had contributed a small step into the deeper understanding on how team satisfaction influences project performance in Malaysia.

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