

EFFECT OF LEADERSHIP STYLES ON THE SUCCESS OF
VIRTUAL PROJECT TEAMS AMONG MULTINATIONAL
COMPANIES IN MALAYSIA

Chin Wai Chun

A research project submitted in partial fulfilment of the requirement
for the degree of

Master of Business Administration

Universiti Tunku Abdul Rahman

Faculty of Accountancy and Management

April 2017

EFFECT OF LEADERSHIP STYLES ON THE SUCCESS OF
VIRTUAL PROJECT TEAMS AMONG MULTINATIONAL
COMPANIES IN MALAYSIA

By

Chin Wai Chun

This research project is supervised by:

Low Chin Kian

Lecturer

Department of Building and Property Management

Faculty of Accountancy and Management

Copyright @ 2017

ALL RIGHTS RESERVED. No part of this paper may be reproduced, stored in a retrieval system, or transmitted in any form of by any means, graphic, electronic, mechanical, photocopying, recording, scanning, or otherwise, without the prior consent of the authors.

DECLARATION

I hereby declare that:

- (1) This Research Project is the end result of my own work and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) The word count of this research report is 19,741

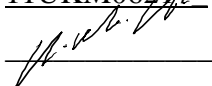
Name of Student: Chin Wai Chun
Student ID: 11UKM06217
Signature: 
Date: 17th April 2017

Table of contents:

	Page
Copyright page	ii
Declaration	iii
Table of contents	iv
List of tables	viii
List of figures	xi
Preface	x
Abstract	xi
1 CHAPTER 1: RESEARCH OVERVIEW	1
1.1 INTRODUCTION.....	1
1.2 BACKGROUND OF STUDY	2
1.2.1 VIRTUAL TEAM.....	2
1.2.2 THE NEED FOR E-LEADERSHIP	2
1.2.3 IMPORTANCE OF E-LEADERSHIP	2
1.2.4 KEY COMPETENCIES OF E-LEADERSHIP	3
1.3 PROBLEM STATEMENT	4
1.4 RESEARCH OBJECTIVE.....	7
1.4.1 THE OBJECTIVE IN GENERAL.....	7
1.4.2 THE SPECIFIC OBJECTIVES	7
1.5 RESEARCH QUESTION	7
1.6 HYPOTHESES OF THE STUDY	8
1.6.1 FIRST HYPHOTHESIS	8
1.6.2 SECOND HYPHOTHESIS	8
1.6.3 THIRD HYPHOTHESIS	8

1.7	SIGNIFICANCE OF THE STUDY	8
1.8	CHAPTER LAYOUT	9
1.8.1	Chapter 1: Introduction	9
1.8.2	Chapter 2: Literature Review	9
1.8.3	Chapter 3: Methodology	9
1.8.4	Chapter 4: Data Analysis	9
1.9	CONCLUSION	10
2	CHAPTER 2: LITERATURE REVIEW	11
2.1	INTRODUCTION.....	11
2.2	REVIEW OF LITERATURE.....	11
2.2.1	VIRTUAL TEAM.....	11
2.2.2	PROJECT SUCCESS	12
2.2.3	LEADERSHIP STYLE.....	14
2.2.4	TRANSFORMATIONAL LEADERSHIP	14
2.2.5	TRANSACTIONAL LEADERSHIP.....	16
2.2.6	LAISSEZ-FAIRE.....	17
2.2.7	LEADERSHIP IN VIRTUAL PROJECT TEAMS	19
2.2.8	MEASURING LEADERSHIP IN VIRTUAL TEAM	22
2.3	REVIEW OF RELEVANT THEORETICAL MODEL	23
2.4	PROPOSED THEORETICAL / CONCEPTUAL FRAMEWORK.....	24
2.5	HYPOTHESES DEVELOPMENT	25
2.5.1	PERCEIVED SUCCESS OF VIRTUAL TEAM PROJECT	25
2.5.2	TRANSFORMATIVE LEADERSHIP STYLE, TRANSACTIONAL LEADERSHIP STYLE, AND LAISSEZ-FAIRE STYLE.....	26
2.6	CONCLUSION	29

3	CHAPTER 3: METHODOLOGY	30
3.1	INTRODUCTION.....	30
3.2	RESEARCH DESIGN	30
3.3	DATA COLLECTION METHOD.....	31
3.3.1	PRIMARY DATA	31
3.3.2	SECONDARY DATA	32
3.4	SAMPLING DESIGN.....	32
3.4.1	TARGET POPULATION.....	32
3.4.2	SAMPLING FRAME AND SAMPLING LOCATION.....	32
3.4.3	SAMPLING ELEMENTS	33
3.4.4	SAMPLING TECHNIQUE	33
3.4.5	SAMPLING SIZE.....	34
3.5	RESEARCH INSTRUMENT	34
3.5.1	THE PURPOSE OF USING QUESTIONNAIRE.....	34
3.5.2	QUESTIONNAIRE DESIGN.....	35
3.6	CONSTRUCT MEASUREMENT.....	36
3.6.2	DATA SCALE OF MEASUREMENT	37
3.7	DATA PROCESSING	37
3.7.1	QUESTIONNAIRE CHECKING.....	38
3.7.2	EDITING	38
3.7.3	CODING	38
3.7.4	TRANSCRIBING	38
3.7.5	DATA CLEANING	39
3.8	DATA ANALYSIS	39
3.8.1	DESCRIPTIVE ANALYSIS	39

3.8.2	SCALE MEASUREMENT	40
3.8.3	INFERENTIAL ANALYSIS.....	41
3.9	CONCLUSION	43
4	CHAPTER 4: ANALYSIS OF RESULTS.....	44
4.1	INTRODUCTION.....	44
4.2	DEMOGRAPHIC DATA	44
4.3	DESCRIPTIVE ANALYSIS	45
4.4	FREQUENCY DISTRIBUTION.....	49
4.4.1	DESCRIPTIVE STATISTIC	49
4.4.2	RELIABILITY TEST	52
4.4.3	INFERENTIAL ANALYSIS.....	52
4.5	SUMMARY	58
5	CHAPTER 5: FINDINGS, IMPLICATION AND RECOMMENDATION	59
5.1	FINDINGS:	59
5.2	IMPLICATION	60
5.3	LIMITATION AND RECOMMENDATION FOR FURTHER STUDIES.....	61
	REFERENCE	63
	APPENDIX A – Questionnaire Part A - Demographics	77
	APPENDIX B – Questionnaire Part B - PIP	81
	APPENDIX C – Questionnaire Part C - MLQ	82
	APPENDIX D – Questionnaire Survey Letter	87

LIST OF TABLES

	Page
Table 1: Cronbach's Alpha coefficient range and strength of association	40
Table 2: Rules of thumb about Correlation Coefficient Size	42
Table 3: Summary of respondent demographic information	45
Table 4: Summary of respondents virtual setting tools	49
Table 5: Descriptive of variables	49
Table 6: Sample for project success	50
Table 8: Reliability statistic	52
Table 9: ANOVA table	52
Table 10: Descriptive statistic	53
Table 11: Pearson correlations output	54
Table 12: Coefficient table	55
Table 13: ANOVA table	57

LIST OF FIGURES

	Page
Figure 1: Theoretical model	23
Figure 2: Conceptual model of the leadership style that influence perceived success of virtual project teams	24
Figure 3: Gender	46
Figure 4: General project management experience	46
Figure 5: General project experience in virtual setting	46
Figure 6: Education level	46
Figure 7: Current project in virtual setting	47
Figure 8: Project scope in geographic region	47
Figure 9: The size of project team	47
Figure 10: Project schedule	47
Figure 11: Project budget	48
Figure 12: Team member time zone different	48
Figure 13: Organizational type	48
Figure 14: Distribution table project success	51
Figure 15: Distribution table transformational score	51
Figure 16: Distribution table transactional score	51
Figure 17: Distribution table laissez-faire score	51

PREFACE

There is research study is conducted for completion of Master of Business Administration program in Universiti Tunku Abdul Rahman. A survey questionnaire is distributed to 100 executives who is working with multinational companies in Malaysia and who has project management experience to study the relationship of leadership styles with virtual project team success in Malaysia. The finding for the study shall provide contribution to organizations in Malaysia for the type of leadership style that can lead to higher rate of virtual project team success.

ABSTRACT

Several research has been conducted that show transformational leadership style impacts team performance in a traditional work environment. The purpose for this study is to extend the result from past studies for the impact of leadership style into work environment which is in virtual setting. With globalization and foreign direct investment into Malaysia, the probability for project team set up in virtual setting is very high. However, there is no research to evaluate for the relationship between leadership style for companies in Malaysia and its impact on virtual project team success. Therefore, building on the theoretical foundation of Bass's 1990 work, this study examined the relationship between three leadership style, transformational, transactional, and laissez-faire with perceived virtual project team success for multinational companies in Malaysia. This present research focused on 100 executives, or respondents who has project management experience and are working with multinational companies in Malaysia. To rate leadership style, Multifactor Leadership Questionnaire is distributed to respondents. To rate project success factor, Project Implementation Profile is distributed to respondents. The relationship between leadership style and perceived project success will be evaluated using regression analysis. The finding conclude that transformational leader style can lead to high success for project team success in virtual setting. Therefore, this support Bass's leadership model application that is beyond traditional setting. The result of this study will positively impact how executive in Malaysia should encourage, groom, train, or recruit project team member with transformational leadership characteristic to have more chance for project success, which is increasing in virtual setting.

1 CHAPTER 1: RESEARCH OVERVIEW

1.1 INTRODUCTION

The emerging of globalization economy has created a trend for organization to increase their presence to be as close as possible to every market with the aim to increase their market share. This has led to organization looking to increase their presence by either setting up a new business venture, acquiring existing business with potential local company, merging with existing & prospective local company, or create joint venture with a local company. Together with the rapid advancement of technology and the possibility to reduce operation cost, a virtual team has emerged together with the use of technology as a communication medium. Zigurs (2003) suggested that the continuous technology development, such as improving bandwidth, integrated handheld device, wireless networks, voice over input, internet video call, video conferencing, and automatic translation can have impact significantly on virtual team communication frequencies and how leadership style can have influence on such teams. As of current, there is several works on e-leadership that focus on leadership in virtual environment and group that is interacting in “group decision support system. Hence, the e-leader consequently created to lead this virtual team in all discussion and lead this team to achieve its goal. Avolio & Kahai (2003) has suggested “the purpose of e-leadership took us to take the relationships among organizational members defined by an organization’s structure and enhance them. The key difference, however, is that e-leadership takes place in a context where work is mediated by information technology, but the collection and dissemination of information required to support organizational work also takes place via information technology”.

As such, many project by any organization will be executed by members connected in a virtual world. With this emerging trend for virtual team and e-leadership, it is important to look how e-leadership style relation to the success of the virtual project. This may have an impact for multinational company in Malaysia where project collaboration virtually has becoming the current trend.

1.2 BACKGROUND OF STUDY

1.2.1 VIRTUAL TEAM

“Fundamentally, virtual teams are groups of people who find themselves separated by distance and/or time, yet have common tasks to perform. The interactions of virtual team members will rely on electronic communications media such as e-mail, audio and video conferencing and web-based tools. The team must deliver at least the results that would be expected of a traditional, collocated team, but from their separated locations (Edward & Wilson , 2004)”.

With the definition above, the virtual team can be traditional team but all member are communicating and collaborating with each other at a distanced geographical locations. This can be challenging if there is no proper management. Thus, it is the managers’ duty to facilitate and manage the collaboration among team members with the help of the appropriate technology that enables efficient communication (Dragusha, 2012).

1.2.2 THE NEED FOR E-LEADERSHIP

The need for leadership is best summarized by the research by Avolio and Kahai (2003); according to their suggestion, four sets of changes within new working environment that have consequences for the emergence for e-leadership. This four sets of changes is (1) access information and media has changed, (2) created a greater workforce connectivity, (3) easier to reach and in touch with others, and (4) communication in the e-environment is becoming more transparent and able to be recorded (Avolio & Kahai, 2003).

The key characteristics that have implication on E-leadership of virtual teams: the spatial or geographic distance that deprive face-to-face communication between team members hence the to use technological as communication medium to connect team members (Khawaj & Bell, 2002). His research finding concludes that the development for e-leadership have impeded two primary leadership functions, that is (1) performance management and (2) team development (Steve & Bradford, 2002).

1.2.3 IMPORTANCE OF E-LEADERSHIP

The importance of e-leadership is very well presented by several research topic. Clemmer (1999) has suggested with the advancement of current information technology especially the emergence of internet as the source of competitive advantage which it cannot be ignored by

business organization except at a very high cost. Plus, with globalization and the need for organization to reach globally, Zaccaro & Bader (2003) suggested that “in the near future, e-leadership will be the routine rather than the exception in our thinking about what constitutes organizational leadership”.

1.2.4 KEY COMPETENCIES OF E-LEADERSHIP

The rapid advancement of technology with the important of internet as suggested by Clemmer (1999) above and the growing importance of e-leadership, has influence most organization to recognize that developing and deploying appropriate leadership capabilities to lead the virtual team effectively. With the importance for e-leadership in this emerging trend, there is also several journals that research into the key competencies.

Heather (1995) suggested for e-leader to excel in virtual workplace six skills is required, which is (1) understand the relationship between the use of the information and the enabling technology, (2) competence with technologies and techniques during virtual operation to establish and maintain central workflow of the information, (3) knows how and when to replace traditional work processes with virtual ones, (4) able to calculate the value of e-technologies, (5) can recognize and encourage creativity and technological innovation, and (6) experiment with ideas that he should not be hesitant in experimenting new ideas and their implementation (Heater, 1995)

Susan (2001) has identified seven competencies for e-leadership, which are (1) communication with followers, (2) managing information resources, (3) communicating with stakeholders outside the organization, (4) facilitating discussion, (4) active listening, (5) empowering, and (6) delegating (Susan, 2001). Gary (2002) has expanded competencies for successful e-leader to take position in organization (1) central sharing of information for quick and effective use, (2) central sharing of information with future direction, (3) central sharing that aligned with organization structure, mission and vision, (4) management of proximity, (5) handle tension creatively, (6) sense of urgency, and (7) people development and values leader (Gary, 2002).

E-leadership and technology works in tandem to manage virtual team. Youngjin and Maryam (2004) that it is not absolutely not required to establish e-leader competency to be expert in new technology. Instead, support group which point the direction of the company or recognize

succession planning within the organizational framework to displace old with new, is required (Youngjin & Maryam, 2004). They believed that some of the e-leaders may already technically sounded in information technology knowledge that elevated them to the leadership position. However, they conclude that with the internet business nature e-leader technical expertise in any executive position may not necessary, however high on technologies vigilant and adaptation of changes that can affect their industry is required (Youngjin & Maryam, 2004).

1.3 PROBLEM STATEMENT

There are studies conducted to research into the impact for e-leadership to the successful for virtual project. Probal Dasgupta (2011) suggested from his literature review on e-leadership that a new medium for leadership goals implementation has arised although the goals of leadership has not changed much, with the continuation to address the issues of motivation, vision, trust, inspiration, and etcetera remains the fundamental leadership objective. Hence, a new leadership paradigm, E-leadership, emerge for the leader to achieve objectives with virtual team that are in space distance and time different within a computer-mediated manner as communication medium amongst leader(s) and followers with computers supported by electronic conduit (Probal, 2011).

The research by Alfred & Luminita (2014) supports the new medium for implementing goals and argued that project managers leading a virtual team through computer technology should overcome the barriers of communication that hinder project managers approach to leading, by providing training and support to operate several types of technology with the aim to minimize miscommunication and to enhance interaction and social presence of leaders and members. Recommendation for project manager to build team cohesion and trust is to implement communication rules which is formal and ensure everyone adherence, more effort to develop communication which is non-task related, constantly updates concerning project path, more explicit and monitor changes to increase their presence felt (Alfred & Luminita, 2014).

A research by Margaret (2010) through here research finds that there is no association between situational leadership style and characteristics of flexibility and effectiveness and virtual project success was accepted. She argues with the result showed that project manager with high effectiveness and flexibility scores no higher or lower virtual project success scores than project manager with low scores (Margaret, 2010). This suggested that the project manager who are

efficient and flexible may not provide high probability for a virtual project to be successful. She proposed that further research need to be conducted, with the effect of what e-leadership style does or would make a difference to the success of virtual project.

Yang et al (2001) has further researched into the effect of leadership style on project performance and they concluded that with the investigation of the relationship between teamwork and project performance, teamwork is positively related to project performance. The findings suggest that project success in terms of schedule performance, cost performance, quality performance, and stakeholder satisfaction can be achieved with stronger team communication and collaboration as well as greater team cohesiveness. They further suggested with significant result that project managers who adopt transactional and transformational leadership may improve team communication, team collaboration, and team cohesiveness.

Lee-Kelleys and Loong's (2003) research to investigate the leadership styles of project managers of virtual teams and the impact of external circumstances on leadership style. She found little evidence that Project Managers of virtual projects could adapt their styles and therefore recommends they should choose projects which would match their styles, suggesting task oriented leaders manage time constrained projects.

Margaret reaffirmed by her suggestion to enhance current or providing new research on e-leadership styles is a recommendation evolving from the research for the study. Suggested areas for future study include enhancing current or providing new research on e-leadership styles and research on the relationship between traditional management theories (including situational leadership) and the virtual project environment, and the need for improved project success and situational leadership surveys specifically for virtual projects (Margaret, 2010).

George (2008) has further researched into the leadership style and project success in virtual projects, has shown existence of relationship that is significance between leadership style, project success in virtual projects, specifically for transformational leadership style. He also concluded that transformation leadership style is more appropriate compared to transactional leadership style in virtual setting.

These researches finding point to extrapolate theory with the aim to improve the understanding of which leadership styles translate into an effective leader for virtual project team members. The suggestion in the literature are from traditional team leadership literature, hence there would be a need to understand the leaderships styles used by those leading virtual project teams which is based on empirical evidence.

A fail project maybe costly to an organization. The problem is the failure to identify the most effective leadership style in a virtual project environment may result in projects being unsuccessful and may negatively affect the implementation of corporate strategic business goals and objectives (Goodbody, 2006).

Projects that is failed can cost business significant amount of money each year (Jarman, 2005). Another illustration from the virtual team collaboration between National Aeronautics and Space Administration (NASA) and MDA Robotics that requires high degree of Virtual Distance from the start, to launch shuttle Discovery July 2005 flight (Baker, 2007). Although the project is ultimately a success, the project got off-tangent due to challenges in managing virtual team and only an enormous effort was needed to get it back on track.

However, if virtual team is managed properly, it can reap benefit for an organization. A virtual team was formed to reduce product cost by combining various subject-specific experts physically located across the United States and as a result, Bowing-Rocketdyne decreased their production cost by more than \$4 million (Vance, 2004).

Previous studies has suggested that there is significant relationship between styles of leadership impact on the virtual project team success. The success for virtual project can be beneficial to a company. With the market place going global, the need for virtual project team is ever increasing. This can be a challenge to local workforce and hence the purpose for this research as an expansion of study into more leadership style that will translate into effective leader for virtual projects team to be successful for organization in Malaysia.

1.4 RESEARCH OBJECTIVE

Per objective above, the objective for this research can be achieve per below:

1.4.1 THE OBJECTIVE IN GENERAL

This research is conducted with the purpose to identify and analyze whether project manager leadership style of transformational leadership, transactional leadership, and laissez faire leadership will have an effect on the virtual project team success for multinational companies in Malaysia.

1.4.2 THE SPECIFIC OBJECTIVES

The specific objectives as below:

- a) To examine the effect of project manager transformational leadership style in relation with success of virtual project team success for multinational companies in Malaysia,
- b) To examine the effect of the project manager leadership style transactional leadership style in relation with success of virtual project team success for multinational companies in Malaysia,
- c) To examine the effect of project manager laissez faire leadership style in relation with success of virtual project team success for multinational companies in Malaysia,

1.5 RESEARCH QUESTION

The research questions that can answer this research project objective as below:

- a) How does project manager leadership style of transformational leadership affect the success of virtual project team for multinational companies in Malaysia?
- b) How does project manager leadership style of transactional leadership affect the success of virtual project team for multinational companies in Malaysia?
- c) How does project manager leadership style of laissez faire leadership affect the success of virtual project team for multinational companies in Malaysia?

1.6 HYPOTHESES OF THE STUDY

The hypotheses is thus developed as below:

1.6.1 FIRST HYPHOTHESIS

H1₀: The project manager's leadership style of transformational leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H1_a: The project manager's leadership style of transformational leadership lead to success of virtual team projects for Malaysia multinational company,

1.6.2 SECOND HYPHOTHESIS

H2₀: The project manager's leadership style of transactional leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H2_a: The project manager's leadership style of transactional leadership lead to success of virtual team projects for Malaysia multinational company,

1.6.3 THIRD HYPHOTHESIS

H3₀: The project manager's leadership style of laissez-faire leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H3_a: The project manager's leadership style of laissez-faire leadership lead to success of virtual team projects for Malaysia multinational company,

1.7 SIGNIFICANCE OF THE STUDY

The result of the study can provide valuable information to project manager, future researcher and/or business entity to identify which leadership style that will provide high probability to virtual project success by expanding the scope from the research of transformational and transactional leadership style, for company in Malaysia. There are three factors or leadership style that will be examined in this study, which are of transformational leadership, transactional leadership, and laissez-faire leadership.

This study can assist any Malaysia organization's managers in depth understand on the influence of certain leadership style towards the high probability of successful virtual project. It will help the manager to identify influence of certain leadership style so they can select more

appropriate screening for ideal candidate as a project manager to lead the virtual team, either by internal in-sourcing, outsourcing, new employment or provide proper training and development to short-listed candidate. There is no common model globally that applies everywhere. With the market now moving towards globalization, the barrier between countries is becoming more transparent with the ever advancement of information technology, which trend emphasizing the importance to identify the leadership style that will influence high success rate for virtual projects.

The conclusions reached in the study may lead to practical leadership strategies and the development of a new leadership model for virtual project teams (George, 2008).

1.8 CHAPTER LAYOUT

1.8.1 Chapter 1: Introduction

This chapter serve as introduction for overview of e-leadership style towards virtual project success. How the research objectives can be achieve, answer to the research question, hypothesis that have to be tested, is presented here, which also include this study of significance and also layout for the research project.

1.8.2 Chapter 2: Literature Review

Discussion for literature review, conceptual framework proposal to identify relationship association and the development of hypothesis is included in Chapter 2. This chapter will conclude with independent variable and dependent variable for the research, including supporting studies from other researcher.

1.8.3 Chapter 3: Methodology

Discussion for the design for the research methodology, collection of data, and instruments for research is included in Chapter 3. Constructs measurement data processing, and method of data analysis is also included.

1.8.4 Chapter 4: Data Analysis

This chapter demonstrate the result patterns and its analysis by using the SPSS version 22 to analyze the descriptive analyses, scale measurement and inferential analyses.

1.9 CONCLUSION

Chapter one, as an introductory chapter present the research background by outlining the foundation for this research project. It also describes the problem statement with the aim to solve for the research project, addressing the objectives, including research questions, and establishing the hypotheses of the study. Continue to chapter two, elaboration of review for the associated literature for this research project that is relevant.

2 CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Quantitative correlational study purpose's is to examine the relationship between the independent variable, leadership style, and the dependent variable, virtual project team success for multinational companies in Malaysia. Chapter 2 contains a review of literature related to the research questions and hypotheses of the study. The literature review includes an overview of major leadership styles, methods for evaluating project success, and an assessment of the effectiveness of virtual project team leadership. In an information-rich, technology-driven society, the traditional concepts of leadership style require reexamination to account for the nature of globally dispersed project teams (Goodbody, 2006). Where leadership style was once about creating stability and uniformity within an organization, the focus changed to adapting to change and diversity in a global business environment (Beranek & Martz, 2005).

2.2 REVIEW OF LITERATURE

Leadership theories and discussion of leadership styles date back to the ancient Greeks (Cawthon, 1996). Creating and managing successful projects requires strong leadership skills (Kuo, 2004). An understanding of project success began to develop in the early 1970s (Belout & Gauvreau, 2004).

2.2.1 VIRTUAL TEAM

In the competitive market, virtual teams represent a growing response to the need for fast time-to-market, low-cost and rapid solutions to complex organizational problems. Virtual teams enable organizations to pool the talents and expertise of employees and non-employees by eliminating time and space barriers (Ebrahim, Ahmed, & Taha, 2009).

The concept of a "team" is described as a small number of people with complementary skills who are equally committed to a common purpose, goals, and working approach for which they hold themselves mutually accountable (Loureiro, Curran, & Zenun, 2004). It is worth mentioning that virtual teams are often formed to overcome geographical or temporal separations (Cascio & Shurygailo, 2003). Based on these definition, virtual teams represent teams work across boundaries of time and space by utilizing modern computer driven technologies. The term "virtual

team” is used to cover a wide range of activities and forms of technology-supported working (Anderson, Mcewan, Bal, & Carletta, Computers in Human Behaviour 23).

2.2.2 PROJECT SUCCESS

The purpose of the quantitative correlational study was to examine the relationship between the independent variable, leadership style, and the dependent variable, perceived project success in virtual project team success for multinational companies in Malaysia. This section of the literature review examines factors shown to impact project success, the dependent variable

Project success theory has been developed since the early 1970s. Definition for project success is initially focused on measuring cost, time, and project delivery quality (Belout & Gauvreau, 2004). Further review in projects success literature for project success factors, “the literature largely ignores the project manager and his or her leadership style” (Turner & Muller, 2005). Project product usage effectiveness factor, development of staff factor, benefits to customer factor, and the environment factor also assist to measure project success (Kendra & Taplin, 2004). Assessment of project success may create conflict if there is experiences, sets of values, and expectations which is uncommon among project stakeholders (Rad, 2003). The perception of project success do not yield full mutual agreement between stakeholders, and people in different role. Hence, to ensure project success, it is important to have quality of planning that include the perspectives of all stakeholders.

The traditional view of the triple constraints of time, cost, and quality and an enhanced view considering the different perspectives of all project stakeholders (Rad, 2003); (Cook , 2004); (Hughes, Tippet, & Thomas, 2004). This suggest additional success criteria may include stakeholder satisfaction, achievement to organizational goal, benefit to organizational strategy and team satisfaction.

The client is primarily concerned with meeting the objectives of the project (Rad, 2003). Schedule and cost attributes are of secondary importance in determining project success (Shatz, 2006). The basis for measuring the success of a project for successful implementations for project deliverables when organization initiates a project, is typical (Shatz, 2006). The project team will focus on the means to complete the deliverables while the client will focus on the quality for the deliverables (Rad, 2003). Hence in the view of the customer, project success is in term of if the

project is properly delivered and the project team view if fundamentally different, for the mean to achieve project success, which is suggested to be in secondary to project delivery.

There is literature that support the project team secondary method to attain project success is as follow. Motivation for people performing project task and activities to manage a project remains key factors for the project to be considered successful by the project team. Project success can be considerable impacted by people issues (Kupakuwana & van der Berg, 2005). Perception that contribute to project success and how project success is defined is factors that project managers is relying upon (Kendra & Taplin, 2004). Time, budget and quality remains as key measurable factor for project success were perceived by project leaders against transitional way of measurement (Kendrick, 2012). However, the main objective of the project attainment was the most important success factor, despite the criteria of time and budget were met (Alfred & Luminita, 2014). There are other important intra-measurement to access project success, such as leaders behaviours, managing expectations, communication, and courage to change scope to remove potential waste of resources (Alfred & Luminita, 2014). Therefore, intra-measurable can be qualitative variables which are also critical for project success (Lee-Kelley & Sankey, Global virtual teams for value creation and project success: A case study, 2008).

Determination of project success or failure rests with the project sponsor and the ability to fulfill the client's needs and expectations (Kendra & Taplin, 2004). Understanding how the project manager's leadership style affects projects, specifically in a virtual project environment, will aid in the development of future project managers (Belout & Gauvreau, 2004).

Pinto and Slevin (1988) has created a most widely quoted project success models, in an attempt to assess which aspects of a project determine its success or failure, by aiming to assist in identifying and measuring 10 critical success factors (CFR) for a successful project outcome. Measuring project success is a complex endeavor but extremely important to effective project implementation.

The use of Project Implementation Profile (PIP) provides an excellent additional monitoring and tracking system, with an overall strategic perspective to be critical for project success, by stressing more on human side of project implementation (Pinto J. , 1990). Hence, current consideration for the best measurement of project success is still PIP (Jugdev & Muller, 2005).

There are advantages identified for using PIP tool in mitigating interface challenges and established how PIP tools could improve project success by improving interface management between stakeholders (Dube N. , 2015). The PIP is generalized into two subscales to define project success, which is the project itself and its client. A project score, client score, and overall score related to a database of 418 projects, in which scores that is below 50th percentile indicates less than successful areas in the project (Pinto & Slevin, 1988).

2.2.3 LEADERSHIP STYLE

Organizations of the future will need leaders who can manage uncertainty and competition within an increasingly diverse workforce to achieve organizational viability and profitability (Antonakis , Cianciolo, & Sternberg, *The Nature of Leadership*, 2004). Past descriptions of leadership include motivating and inspiring (Avolio B. , *Leadership Development in Balance: MADE/Born*, 2004), influencing the behavior of other people toward group goals (Barbuto Jr., 2005), and giving direction to others to accomplish specific results (Kuo, 2004).

2.2.4 TRANSFORMATIONAL LEADERSHIP

Transformational leadership is defined as a type of leadership in which interactions among interested parties are organized “around a collective purpose” in such a way that “transform, motivate, and enhance the actions and ethical aspirations of followers” (Simola, Barling, & Turner, 2012). Transformational leadership is a leadership style that seeks positive transformations “in those who follow” and that achieves desired changes through the “strategy and structure” of the organization (Geib & Swenson, 2013).

Although seminars, books, training, and formal education will better prepare an individual for transformational leadership, the method for doing so is highly dependent upon the individual’s predisposition toward change and the organization’s readiness for change. Burns (1978) described transformational leaders as uplifting the morale, motivation, and morals of followers. Using words of inclusion, recognizing the individual needs of followers, and assuring followers no obstacle is too large to overcome will sell the organization’s vision to all stakeholders (Rubin, Munz, & Bommer, *Leading from within: The effects of emotion recognition and personality on transformational leadership behavior*, 2005). Hence, transformational leadership requires transformation, beginning first with the individual and then with the organization (George, 2008).

Transformational leadership requires a transformation in the followers by raising awareness regarding the importance of the organization and not just the individual (Gillespie & Mann, 2004). Transformational leadership as a leadership style depicting the description of a “wide range of leadership” (Northouse , 2004). Burns (1978) introduced transformational leadership as a leader to transform follower’s personal values by initiating changes. Bass (2008) further differentiate between transformational and transactional leadership where one build different relationship whereas the other based on personal, emotional and inspirational exchange. Transformational leaders motivate followers to work for transcendental goals and for aroused higher level needs for self-actualization in place of immediate self-interest (Burns J. , 1978). Avolio and Bass (2004) identified four unique but interrelated behavioral components of transformational leadership: idealized influence, or charismatic role modeling; inspirational motivation, or articulating an appealing vision; intellectual stimulation, or promoting creativity and innovation; and individualized consideration, or coaching or mentoring.

A closer look at the four key aspects of transformational leadership identified by Avolio and Bass (2004) clarifies how transformational leaders can achieve results in several ways. The first aspect, idealized influence, indicates “transformational leaders have associates who view them in an idealized way, and as such, these leaders wield much power and influence over followers” (Avolio & Bass, 2004). Hence followers develop strong feeling with the confidence shown by such leaders. The second aspect, inspirational motivation, involves articulating shared goals and understanding in simple ways (Avolio & Bass, 2004). This suggest that when organizational goals and objectives are clear, follower identification with the leader is not essential. The third aspect, intellectual stimulation, encourages followers to question beliefs, assumptions, and values to develop the capacity to solve problems by being creative and innovative (Avolio & Bass, 2004). The final aspect, individualized consideration, involves treating each follower uniquely and recognizing individual contributions to organizational goals and objectives (Avolio & Bass, 2004).

Transformational leaders are those leaders that tap the motives of followers to achieve the goals of leaders and followers (Burns, 1978). Transformational leadership style has a greater effect on followers than transactional leadership (Burns, 1978). Transformational leaders create an awareness of moral and ethical implications transcending self-interest for the greater good (Walumbwa, Lawler, Avolio, Wang, & Shi, 2005).

Transformational leaders act as change agents, transforming followers' attitudes and beliefs (Bass, Avolio, Jung, & Berson, 2003). By providing vision and developing emotional relationships with followers, transformational leaders motivate followers to a higher level, going beyond self-interest (Antonakis, Avolio, & Sivasubramaniam, 2003). Avolio and Bass (2004) proposed transformational leader behaviors include four components: inspirational motivation, idealized influence, individualized consideration, and intellectual stimulation. The challenge becomes how to apply the transformational process to virtual project teams (Keegan & Den Hartog, 2004).

2.2.5 TRANSACTIONAL LEADERSHIP

Followers receive rewards for accomplishing specified goals or achieving specific levels of performance in exchange process for transactional leadership (Bass, Avolio, Jung, & Berson, 2003). Leaders recognize followers' needs and clarify how those needs will be met (Bono & Judge, 2004). Transactional leader do not have priority to focus on followers personal development or needs (Bass, 1990). Hence this suggest that the leaders provide incentives for followers for effort. This incentive maybe wages increment for performing employee to influence another employee. If a team member foresees positive feedback or rewards, he or she will possibly contribute more to achieve team goals (Kuo, 2004). Acknowledging individual and group behavior with meaningful incentives fosters team spirit.

Instead of incentives for positive results, the reverse may also be applicable for transactional leader. If projects exceed budgets or deadlines, negative reinforcement such as reprimands or other disciplinary action may be used (Barbuto Jr., 2005). Hence this suggest that punishment instead of incentives if the results achieved is negative to the followers. Actions or traits, historically, is the theories for most of the management and leadership study (Northouse , 2004).

Leader-member exchange views leadership as the interactions between leaders and followers (Martin, Thomas, Charles, Epitropaki, & McNamara, 2005). A favorable relationship is possible when the leader perceives the employee to be reliable and competent (Yukl, 2006). When the quality of the relationship is high, employees tend to be more responsible and contribute more to the organization (Bass, 1990).

Although transactional leaders enforce rules to avoid mistakes, Mutual satisfactory agreements with rewards based performance lead to successful outcomes, however transactional leader also enforce strict rules to avoid mistake (Judge & Piccolo, 2004). However, Avolio & Bass (2004) posited, “transactional leadership often fails to work because the leader lacks the necessary reputation or resources to deliver the needed rewards”. When negative contingent reinforcement is used, followers tend to see the transactional leader in a different way (Avolio & Bass, 2004). A negative approach does not encourage maximum effort (Yukl, 2006).

Typically negative reinforcement as punishment yield negative impact. In general employees view negative reinforcement as punishment. People may experiencing negative reinforcement will only work as hard as necessary to avoid unpleasant consequences. Virtual project teams require self-motivated members who are willing to provide maximum effort to accomplish project tasks with little supervision (Lojeski, Reilly, & Dominick, 2006).

There is a significant negative relationship between transactional leadership and team innovativeness (Liu, Liu, & Zeng, 2011). Transactional leadership and transformational leadership is a distinct construct underpinned by separate ethical foundations, specifically transactional leadership flows from “teleological ethical values (utilitarianism)” and transformational leadership flows from “deontological ethical values (altruism, Kantian principle) (Grove & LaRocca, 2011).

Hence it will be interesting to look into the relation of transactional leadership style in relation with virtual project success.

2.2.6 LAISSEZ-FAIRE

Lewin, Lippit, and White (1939) first described the laissez-faire leadership style by identifying three different styles of decision making: autocratic, democratic, and laissez-faire. The autocratic leader makes decisions without consulting others. Much like a dictatorship, the leader’s word is law. Manipulation, threats, and even force ensure the accomplishment of the leader’s goals. Communication is usually one-way. Employees are told what, how, and when to accomplish a task.

Feedback is limited to communicating with employees only when a mistake occurs or a task is not complete (Daft & Lane, 2005). Employees often resent such treatment, which results in higher levels of absenteeism and turnover (Hernez-Broome & Hughes, 2007). Although subordinates may object to the stressful nature of the autocratic style, the style may be appropriate in some situations. Rapidly changing conditions in the workplace may call for urgent action, leaving little time for seeking employee input. Some employees may even favor an autocratic leader in stressful times, preferring to be told exactly what to do and when (Ciampa & Watkins, 2005).

Employees often respond to a democratic style with high morale and team spirit, in tandem with experienced and highly skilled employees who exhibit buy-in through empowerment, the participative style can be effective. Team members feel more engaged in the decision-making process when encouraged to participate in the process (Baldoni, 2004). Together, the leader and the team members can generate alternatives for consideration (Antonakis, Cianciolo, & Sternberg, *The Nature of Leadership*, 2004). The democratic leadership style offers less control than the autocratic style and more guidance than the laissez-faire style (Zigami, Blanchard, O'Connor, & Edeburn, 2004). Hence allowing participation from employee is not a sign of weakness, instead the employee can gain respect for a leader valuing their input before making decision.

Virtual teams need a clear purpose and focus (Juenemann, 2005). Face-to-face communication uses verbal and nonverbal cues to transmit subtle shades of meaning (Rico & Cohen, 2005). Without the ability to discern ambiguous directions, the virtual team is less likely to be successful (Lojeski, Reilly, & Dominick, 2006).

Skogstad et al (2007) mentioned that, “Laissez-faire leadership may be more of a counterproductive leadership style than a zero type of leadership style, associated with a stressful environment characterized by high levels of role stress and interpersonal conflicts”. Organizations should be aware of the potential negative effects of a laissez-faire style. Role conflict and role ambiguity result in employee interpersonal stress (Kelloway, Mullen, & Francis, 2006). Indirect behavior such as intentionally missing a meeting hosted by a subordinate or failing to support a subordinate when a client or customer questions the subordinate’s actions can create an undesirable effect on followers (Skogstad et al, 2007).

The laissez-faire style is neither transactional nor transformational because leaders avoid responsibilities, fail to make decisions, and are usually absent when needed (Skogstad et. al., 2007). This is the leader that provides no direction to employees on how to determine goals, make decisions, or resolve problems (Northouse , 2004). With no direction, it may be a problem in virtual environment. Although leaders may emerge from the virtual team to provide organization and structure, communication of organizational goals and objectives from top leadership remains a necessity (Carte, Chidambaram, & Becker, 2006). Hence Laissez Faire leadership may increase the project team member frustration from the lack of communication.

2.2.7 LEADERSHIP IN VIRTUAL PROJECT TEAMS

A virtual project team is a group of geographically dispersed workers brought together across time and space through information and communication technologies (Juenemann, 2005). Virtual project teams work closely together, even though many miles, time zones, and cultures may separate them (George, 2008). For many reasons, including corporate mergers, globalization, the need to respond rapidly to changing markets and customer demands, increasing sophistication of technology, travelcosts, and the trend toward flexibility in the workforce, organizations change from the old ways of conducting business to new ones (Piccoli & Ives, Trust and the unintended effects of behavior control in virtual teams, 2003).

The number of virtual teams is increasing in the global business environment (Anu, 2006). Advances in technology and collaboration software enable greater use of virtual teams (Saunders, Van Slyke, & Vogel, 2004). Virtual teams will play an important role in shaping organizational structure and enable organizations to become more flexible (Seilheimer, Ishman, & Seilheimer, 2005). The trend for business look to gearing towards virtual project teams. In the year 2034, virtual teams and e-leadership will be the way forward in global leadership (Bass, Transformational Leadership: Industrial, Military, and Educational Impact, 2008).

The trend for globalization is also driving this trend. Globalization is driving organizations to implement virtual, geographically dispersed teams to pool the assorted talents of employees (Furst, Reeves, Rosen, & Blackburn, 2004). Virtual project teams eliminate the barriers of time and space. Many organizations rely on the skills of professionals located throughout the country and even the world. Virtual project teams allow businesses to gather the most qualified employees

for particular jobs, regardless of the employees' location ((Zakaria, Amelinck, & Wilemon, 2004). Organizations using virtual project teams can maximize resources and hire the best people for the job, regardless of where the people live (Beranek & Martz, 2005). However, the distance between team members in virtual project teams often restricts face-to-face communication and impedes primary leadership functions (Lojeski, Reilly, & Dominick, 2006) . Hence the distance created in virtual team has the inability to observe and measure performance that makes coaching and mentoring difficult.

Leadership in the virtual environment is extremely important as leaders attempt to influence individuals not seen on a regular basis (Piccoli, Powell, & Ives, Virtual teams: team control structure, work processes, and team effectiveness, 2004) . Virtual project teams can indeed be difficult to design, costly and complex to implement, difficult to manage, and potentially less productive than traditional face-to-face, collocated teams (Gibson & Cohen, 2003). A contingent of theorists contended leadership is no different in virtual project settings (Piccoli, Powell, & Ives, Virtual teams: team control structure, work processes, and team effectiveness, 2004). Although a significant amount of research indicates leadership is vital for success in virtual project teams, the form leadership takes in an emerging virtual realm remains unclear (Furst, Reeves, Rosen, & Blackburn, 2004).

Leaders ensure the team members have enough information to understand the leaders' expectations as well as those of the team (Jarvenpaa, 2004). Leaders define the tasks, the expectations, and the environment so virtual project team members will have a clear understanding of how to do the work and in what order Without clear lines of communication, mistakes, mistrust, unexpressed viewpoints, and unresolved conflicts are likely to occur (Lee-Kelley, Grossman, & Gannings, A social interaction approach to managing the "invisibles" of virtual teams, 2004). Clear lines of communication are essential for the success of a virtual project team.

Zigurs (2003) proposed virtual project teams might eventually learn to communicate as effectively as face-to-face teams when developing intragroup relationships. Zigurs (2003) also suggested that this process will take longer for virtual project teams than for traditional teams because casual conversations are the basis for developing these relational ties. According to

research by Zigurs (2003), groups establish frames of reference through unintended casual conversations occurring in face-to-face communications that help build trust within groups.

Because virtual project teams usually do not share a common physical workspace, a leader must find a way to develop and maintain a sense of team identity (Aubert & Kesley, 2003). Leaders create strong symbols uniting people across distance and promise as much access for virtual project team members as available to colleagues located in the same building (Beranek & Martz, 2005). Hence a leader in a virtual team face challenge in cost associated with getting the team to perform with time for the team to be comfortable in virtual environment and develop relationship. The second challenge is to make the virtual team member to co-operate and focus in a geographically dispersed environment.

Leaders in the virtual project team environment influence rather than force, and different people take the lead as circumstances require (Furst, Reeves, Rosen, & Blackburn, 2004). The current state of the literature is rather conflicting. Some studies found virtual employees increased performance over traditional face-to-face employees (Gibson & Cohen, 2003), while others indicated a decrease in performance (Jarman, 2005). Prior research indicates many managers are unsure about virtual environments and are hesitant to implement virtual teams (Lojeski, Reilly, & Dominick, 2006).

Bass (1990) reported managers and leaders find employees seem to be communicating differently when geographically separated. He also noted isolated managers routinely do not interpret headquarters memos accurately. The lack of nonverbal cues available to virtual employees may result in the reduced quality of performance feedback, leading to lower quality relationships along with decreased job satisfaction and performance. Bass (1990) similarly remarked, "Physical proximity and the availability of channels of communication increase interaction potential" (p. 658). With the technology deployed in virtual setting these bridge can be smaller.

Virtual teams and networks demand more leadership, not less (Lipnack & Stamps, 1997). To be a successful virtual team leader requires a special set of skills (Bock, 2003). Virtual team leaders possess all the qualities of traditional face-to-face team leaders, plus an additional set of skills and competencies (Dube & Pare, 2004). Effective virtual team leaders know how to facilitate

team-based processes: coordinating and collaborating across geographical and cultural boundaries via technology (Hoegl & Proserpio, 2004). The use of teams of workers dispersed geographically will continue to change the way people work in groups and refine the nature of teamwork in the future (Zakaria, Amelinck, & Wilemon, 2004). Successful virtual team leaders understand the fundamental principles of team output and accountability and do not let time and space alter those precepts.

2.2.8 MEASURING LEADERSHIP IN VIRTUAL TEAM

Virtual teams are different from traditional teams. There is no difference between leadership in virtual environment and traditional environment (Emery & Barker, 2007). There is research that suggested there is not sufficient coverages for the complexity of virtual work environment with the existing body of knowledge (Cromb, 2005). This can be supported by the research Galup et al mentioning specific challenges of technicality that virtual environment engenders with communication and team building, it remains unclear if successfulness of a leader in virtual environment or in a traditional environment, is a charismatic or transformational leader, or other leadership styles might be a better match, like transactional or laissez faire (Galup, Klien, & Jiang, 2008). Current researches commonly focuses on the relationship of team members within the virtual team but the relationship on the specific style of leadership remains limited (Zhu & Kraemer, 2005).

2.3 REVIEW OF RELEVANT THEORETICAL MODEL

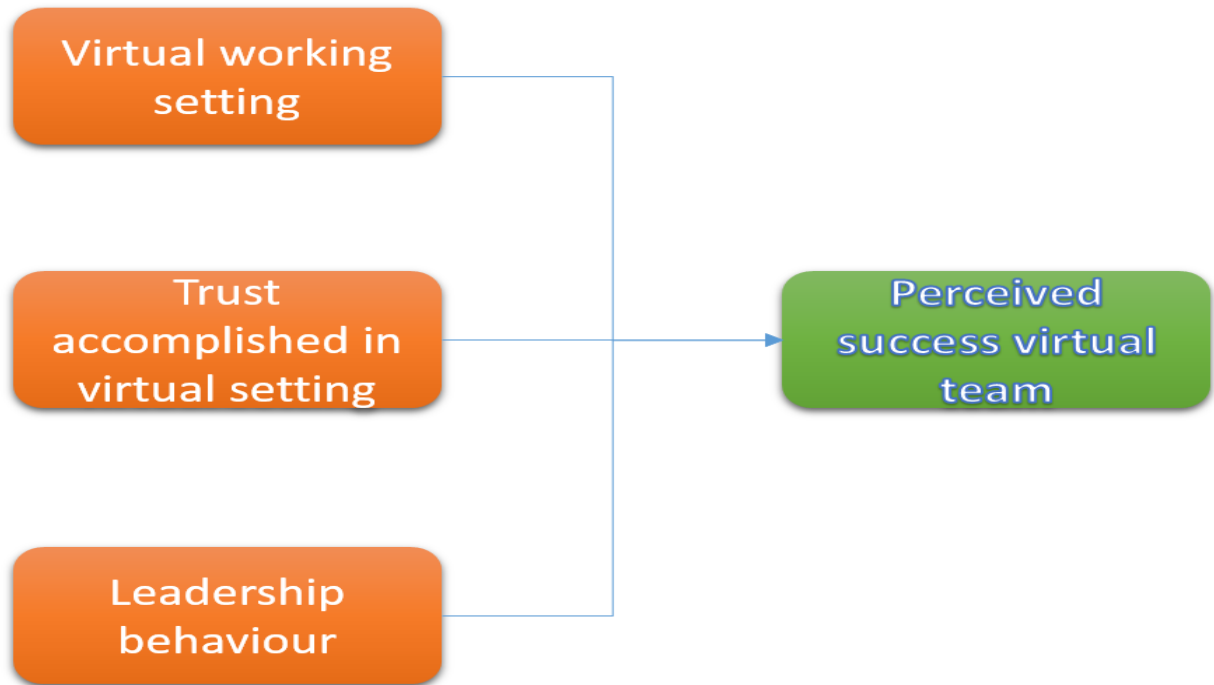


Figure 1: Theoretical model Source: (Alfred & Luminita, 2014),

The theoretical model developed by Alfred & Luminita (2014) has developed this theoretical model, focus on the challenge on trust building, virtual relationship, task- and relationship-oriented leadership behaviours to explore the leadership of project managers in virtual setting for perceived project success. Alfred & Luminita (2014) concluded with findings that leadership sharing was perceived as beneficial for coordination of tasks however not applicable to decision making.

This theoretical model provides result of leadership behavior towards perceived project success by applying The Leadership Dimension of Task-oriented behaviours and Relationship-oriented behaviours. To conclude, if there is increase in task-related leadership behaviors and render trust-building difficult to achieve, the E-leadership will encounter challenges. However, there is opportunities created in virtual environment to reduce and foster the constraints of these challenge (Alfred & Luminita, 2014).

The contributions for this research has took a step forward to extend the findings on current literature on e-leadership by key challenges identified to lead virtually by exploring the effect of perceived project success and effectiveness (Alfred & Luminita, 2014). In addition, Alfred & Luminita (2014) has viewed that when task is complex, shared leadership in virtual environment will be beneficial and relevant, in addition they also supported the benefit of shared leadership for a better coordination of tasks within virtual teams, but limit decision-making capability and preferred good leaderships skill distingue among member.

2.4 PROPOSED THEORETICAL / CONCEPTUAL FRAMEWORK

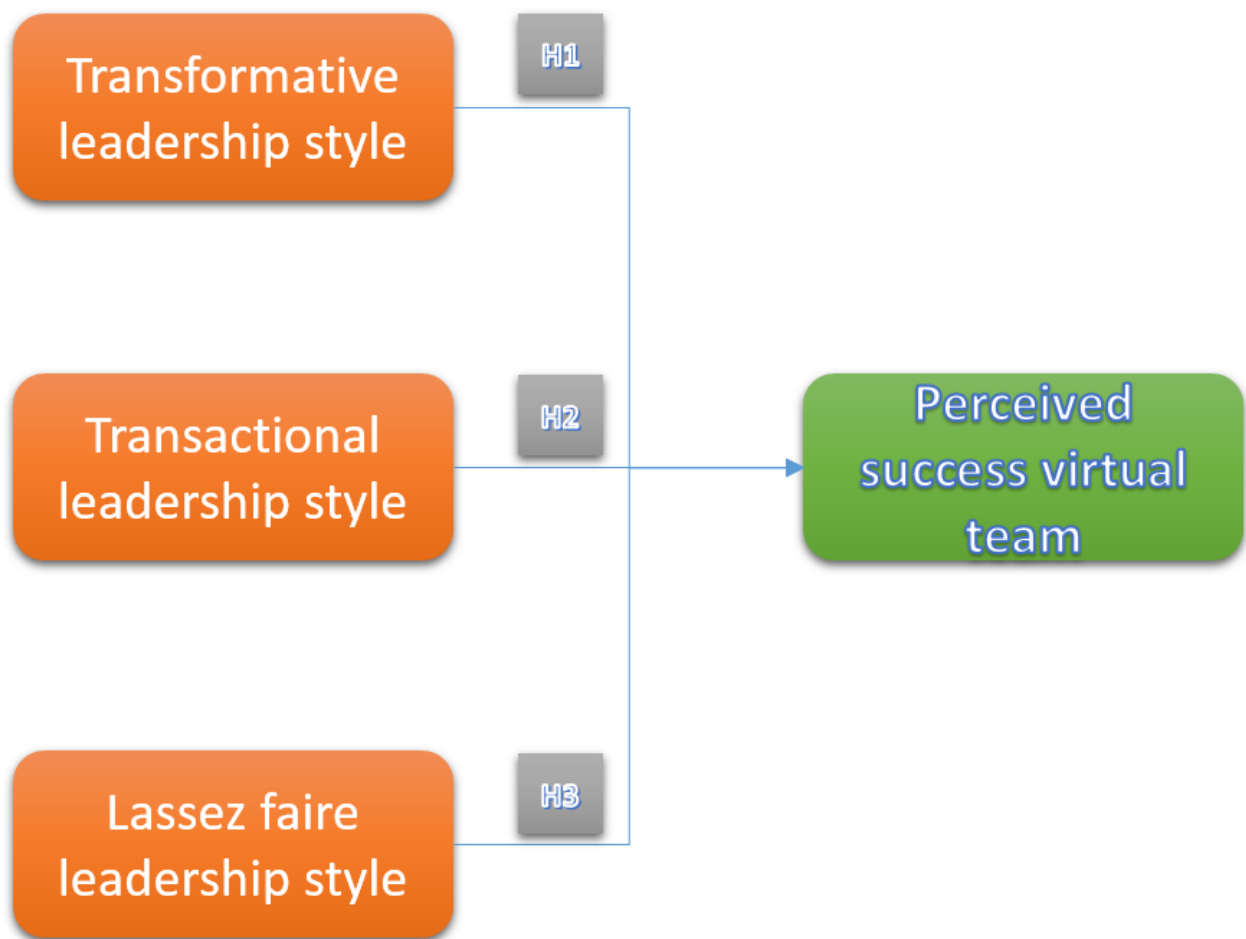


Figure 2: Conceptual model of the leadership style that influence perceived success of virtual project teams

The conceptual framework, as figure 2, will serve as the foundation for this research study to continue. This is adopted from the review of theoretical model which is developed by Alfred and Luminita (2014). It is study to explore the effect of leadership style as an extension from Alfred and Luminita (2014) research above for leadership behaviours impact on perceived project success. From the research objective and research question, this framework developed. In this framework, the perceived success of virtual team projects is located at right hand side which is the dependent variable, whereas the leadership style of transformational, transactional, and laissez faire represented the independent variables located at left hand side. To identify the dependent variable and independent variables, the conceptual framework is developed to shows their relationships expected between one another. With the discussion of each independent variables and dependent variable earlier, three hypotheses is presented in the following section.

2.5 HYPOTHESES DEVELOPMENT

2.5.1 PERCEIVED SUCCESS OF VIRTUAL TEAM PROJECT

Lee-Kelley et al. (2003) set out to find which Project Management Knowledge Areas are critical to project success and whether the project manager's leadership style influences his or her perception of control. What they did find was the project manager's leadership style influenced his or her perception of success on the project. They suggest:

[There is] a significant relationship between the leader's perception of project success and his or her personality and contingent experiences. Thus the inner confidence and self-belief from personal knowledge and experience are likely to play an important role in a manager's ability to deliver a project successfully. (p. 590).

It seems that the project manager's emotional intelligence has an impact on his or her perception of the success of the project (Turner & Muller, 2005).

Sheikh Ali et al (2014) concludes that there is a significant positive relationship between three independent variables (transactional leadership style, Transformational leadership and Laizes Faire leadership styles) on Corporate Innovation. Cook (2004) suggested that it is logical to believe that the adoption of project management practices will have a positive impact on the success of a project management organization. He concludes that the results of his study provided reliable evidence to support this assertion.

Sheikh Ali et al (2014) used transactional leadership style, transformational leadership style, and laissez-fair leadership style as a factor to measure the influence on corporate innovation, where all factors have significant positive impact on corporate innovation. George (2008) has conduct the same test for quantitative correlational study was to examine the relationship between the independent variable, leadership style, and the dependent variable, project success in virtual projects.

Hence, the three predictor variables which are leadership style of transformational, transactional, and laissez faire have been chosen to test on the relationship between the three predictor variables and perceived success of virtual team base in the context of Malaysia local multi-national company on the particular measurement approaches.

2.5.2 TRANSFORMATIVE LEADERSHIP STYLE, TRANSACTIONAL LEADERSHIP STYLE, AND LAISSEZ-FAIRE STYLE

Based on research study Khan et al (2014), their study to test the relationship between transactional leadership style, transformational leadership style, and Laizes Faire leadership style, to corporate innovation in Somalia, obtained significant relationship with detailed definition of criterion variable (project success) by examination of variation in connection to the predicting variables (Transformational, Transactional and Laissez-Faire Styles of leadership). The is supported from the present study that managers that is influential combines both style of transformational leadership and transactional leadership (Khan, et al., 2014). .

Based on the research study, George (2008) show evidence for statistically significance relationship exist between independent variables of transformational, transactional, and laissez-faire leadership styles with dependent variable of virtual projects success. George (2008) also suggested that the virtual project environment may restrict many transformational leadership traits, the conclusion that a transactional leadership style might be more effective is understandable. George (2008) also suggested that the virtual project environment may restrict many transformational leadership traits, the conclusion that a transactional leadership style might be more effective is understandable. However, he suggested that some traits attributed to transformational leaders, such as charisma and vision, may not translate well to a virtual project team setting (George, 2008).

The study by George (2008) is populated with sample of respondent with qualification with Project Management Institute, and is concentrated in United States of America. The similar approached will be attempted to research into the relationship between transformational, transactional, and laissez faire leadership style with success of virtual project in the local context of Malaysia local multinational companies.

2.5.2.1 TRANSFORMATIONAL LEADERSHIP STYLE

Avolio and Bass (2004) proposed transformational leader behaviors include four components: inspirational motivation, idealized influence, individualized consideration, and intellectual stimulation. Keegan & Den Hartog (2004) suggested that the challenge becomes how to apply the transformational process to virtual project teams (Keegan & Den Hartog, 2004).

Khan et al (2014) concluded that there is a significant relationship between transformational leadership to corporate innovation for Telecommunication Company in Somalia. George (2008) also indicated that transformational leadership style as the dominant and effective style in virtual projects. Both leadership style of transformational and transactional are equally effective across communication media in teams completed short-term, problem solving tasks (Hambley, O'Neill, & Kline, 2006). The analysis results show transformational leadership style has a positive effect on the effectiveness of a virtual team (Kleijnen, 2014). There is also significant and strong positive relationship between an employee's job satisfaction in virtual setting and the transformational leadership style (Hogue, 2015).

Hence it would be the purpose for this research to establish if there is any significant relationship between transformational leadership styles with virtual project success in the context for Malaysia multinational company.

H10: The project manager's leadership style of transformational leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H1a: The project manager's leadership style of transformational leadership lead to success of virtual team projects for Malaysia multinational company,

2.5.2.2 TRANSACTIONAL LEADERSHIP STYLE

Lojeski et al (2006) suggested that virtual project teams require self-motivated members who are willing to provide maximum effort to accomplish project tasks with little supervision. Hence it will be interesting to look into the relation of transactional leadership style in relation with virtual project success.

Hambley et al (2006) in their study also suggested that transactional leadership style in virtual team is effective across communication media in teams to complete short-term, problem solving tasks. George (2008) also suggested that the virtual project environment may restrict many transformational leadership traits, the conclusion that a transactional leadership style might be more effective is understandable. Khan et al (2014) found transactional leadership style at second place among managers as the most influential leadership styles. Kleijnen (2014) studies has suggested positive relationship between transactional leadership style with effectiveness of a virtual team.

Hence further research with purpose for this research to re-examine if there is any significant relationship between transactional leadership styles with virtual project success in the context for Malaysia multinational company.

H2o: The project manager's leadership style of transactional leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H2a: The project manager's leadership style of transactional leadership lead to success of virtual team projects for Malaysia multinational company,

2.5.2.3 LAISSEZ FAIRE LEADERSHIP STYLE

The laissez-faire style is neither transactional nor transformational because leaders avoid responsibilities, fail to make decisions, and are usually absent when needed (Skogstad et al, 2007). Carte et al (2006) suggested that although leaders may emerge from the virtual team to provide organization and structure, communication of organizational goals and objectives from top leadership remains a necessity. Hence Laissez Faire leadership may increase the project team member frustration from the lack of communication.

Khan et al (2014) found that there is no significant relationship between laissez-faire leadership styles with corporate innovation. George (2008) also found the same significant results. The research of Kleijnen (2014) did not study the impact of laissez-faire leadership style on effectiveness on virtual team. Neither, Hambley et al (2006) also did not include laissez-faire leadership style for their research on virtual team effectiveness across communication media in teams to complete short term, problem solving tasks. The laissez-faire leadership style which is lack of leadership is not examined (Hambley, O'Neill, & Kline, 2006). Interestingly, studies assert that laissez-faire style is associated with dissatisfaction, unproductiveness and ineffectiveness (Koech & Namusonge, 2012).

Hence it would be the purpose to establish if there is any significant relationship between laissez-faire leadership styles with virtual team project success for Malaysia local multinational company.

H3o: The project manager's leadership style of laissez-faire leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H3a: The project manager's leadership style of laissez-faire leadership lead to success of virtual team projects for Malaysia multinational company,

2.6 CONCLUSION

Chapter two provide a comprehensive view and understanding of this study based on the information which is included. The association between the dependent variables and all independent variables by hypothesis development. In Chapter 3 appropriate research method to test the

3 CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

In order to test the date required, the detailed methodology and hypothesis shall be discussed in this chapter.

3.2 RESEARCH DESIGN

The research design is an elaboration of the “Nature of the Study” section from chapter 1 and logically derives from the Statement of the Problem and Purpose of the Study sections from chapter 1 (Marilyn & J Bruce, 2001) . A need to describe and measure the degree of relationship between two or more variables resulted in the selection of a quantitative correlational design (Creswell, 2011). A quantitative research method, specifically correlation analysis, provided the group of statistical measures considered necessary to portray the relationships between the independent variable, leadership style, and the dependent variable, project success in virtual project teams (D. Leedy & Ormrod, 2012).

Quantitative research method will be conducted to measure the variable that would affect success of virtual team project success project team. Asking specific and narrow questions to obtain measurable variables, or detailed questions to obtain measurable and observable numerical data on variables is used in quantitative research (Creswell, 2011). Variable of the study will be clear if the selection of quantitative design is appropriate (Creswell, 2011). At minimum quantitative designs consist of two types of variables which is dependent variable and independent variable (Creswell, 2011).

Data collected in the format of words, pictures, or objects is subjective which is qualitative data collection (Neuman , 2009). When variables are unknown, a qualitative design may help identify what is import and what needs to be studied (Leedy & Ormrod, 2004). Neuman (2009) also suggested description, interpretation, and certain assumptions or generalizations validation is help by qualitative research. With clear variables used in this research, quantitative design will be used to examine the relationship between independent and dependent variables with the aim to address the research question.

Relationships among variables to investigate research questions is the variable languages used in quantitative research. As opposed to a constant, a variable can fluctuate or expressed as more than one value (Marilyn & J Bruce, 2001). It is necessary and important to understand variables when analyzing the data. It is imperative to have a clear distinction between independent variables and dependent variable (Creswell, 2011). An independent variable stands alone and is not changed by the other variables measured. Dependent variables are subject to change on other factors. For example, a test score is a dependent variable because the score could differ depending on how much a person studied or slept the night before (Neuman , 2009).

Correlations, observations, and surveys are part of the research methodologies for quantitative research. Experimental and causal-comparative methodologies can be an additional quantitative approach (Neuman , 2009). Summarized information with statistical analysis can be yielded from each of these approaches. To look into the relationship between one dependent variable and one independent variable, a correlation is simplified by the analysis of data processing (Creswell, 2011). Degree of relationships can be determined by correlational research with the variables identified and distinguished (D. Leedy & Ormrod, 2012).

3.3 DATA COLLECTION METHOD

Data they and its collection is important for research study. Collection of data which is inaccurate may lead to misleading results and thus it is important to select the correct type of data for this study. Also, both primary and secondary data are will be examined to determine the hypotheses and research question.

3.3.1 PRIMARY DATA

The data originated by the researcher for the specific purpose of addressing the problem at hand Primary data are original work of research study or raw material without the interpretation that represent an official opinion or position is defined as primary data (Malhotra, Hall, Shaw, & Oppenhiem, 2002). Hence, primary data are always the most authoritative because the information has not been filtered or interpreted by any second party (Cooper & Schindler, 2006). There is several way of collection of primary data, however in this research the primary data are collected through the use of person-administered questionnaire survey. This method are used as questionnaire survey to provide standardization in which all respondent are answering the same

question and are exposed to the same response option for each question and finally lead to the ease of administration and analysis (Burns & Bush, 2013). All the collected statistical data will be manipulated by the statistical analysis techniques in order to produce a finding in Chapter 4.

3.3.2 SECONDARY DATA

The term secondary data refers to data not gathered for the immediate study at hand but for some other purpose (Hair, Bush, & Ortinau, 2002). The advantages of using secondary data in this research are the cost and time economies they offer. Useful secondary data information can be obtained through the internet or relevant website with the relevant journals or articles which are consistent with researchers' research study. Other than that, secondary data can help to identify problem, better define problem, develop an approach to the problem and formulate an appropriate research design such as by identifying the key variable (Malhotra, Hall, Shaw, & Oppenheim, 2002). Therefore, researcher should not bypass secondary data. However, in some situation, secondary data might not completely fit the research problem and there may be problems with their accuracy. In this case, researcher needs to proceed to primary data as the secondary data are exhausted or show diminishing returns (Churchill & Iacobucci, 2005).

3.4 SAMPLING DESIGN

3.4.1 TARGET POPULATION

Sampling design begins with defining the target population precisely. Elements and objects collection that is seek by the researchers to acquire information and reference is called the target population (Malhotra, Hall, Shaw, & Oppenheim, 2002). Understanding the respondent's responses on project manager with virtual project team success for multinational companies in Malaysia remains the objective for this study. Therefore, project team members regardless of age and gender, who is work in multinational company in Malaysia will be selected in the survey, is the target population. Multinational company will provide high probability of exposure for the project team to be involved in virtual project team.

3.4.2 SAMPLING FRAME AND SAMPLING LOCATION

A sampling frame is a representation of the elements of the target population, to identify the target population (Malhotra, Hall, Shaw, & Oppenheim, 2002). The location for sampling is within Malaysia. Distribution of questionnaire to the respondents in the selected area to seek for broader

variety of respondents who has project management experience and working in a multinational company to increase the likelihood for virtual project team.

3.4.3 SAMPLING ELEMENTS

Desired information that about or come from the object (or person) is an element (Malhotra, Hall, Shaw, & Oppenheim, 2002). This research target respondents selected include the working adults whose is working with Multi National Company (MNC) located in Malaysia. This target is selected to test the model for leadership style effect on virtual team project success in Malaysia. Adult working in a MNC company will have or may have the experience and exposure to work in a project with virtual setting. They will be targeted because they can provide the relevant project manager leadership style needed based on their knowledge and experience. For example, working adults in MNC who are involved in a virtual project setting, have a suggestion or idea on which project manager leadership style may lead to virtual project success. They may even provide idea to improve the success of virtual project teams with suggestion on the relevant project manager leadership style. Consequently, project manager leadership style may influence the success of virtual project teams.

3.4.4 SAMPLING TECHNIQUE

The technique of sampling available to be considered in this study, which are non-probability and probability technique. With the consideration for the cost (not expensive), effectiveness (highly used), and sample size (do not required larger population), non-probability technique will be used in this study.

Sampling technique Quota is selected in this research because statistical inferences are often based on quota samples and other nonrandom sampling method used in the real world (Burns & Bush, 2013). According to Malhotra (2006, p.336), quota sampling is a non-probability sampling technique which has two-stage restricted judgmental sampling. To develop this quota, the first stage consists of developing control categories or quotas of population elements. In second stage, sample elements are selected based on convenience or judgment.

Sample of 100 respondents is the quota selected. As the next step, selection of a convenience sample element, and finally distribution the questionnaire to working adults. Often, respondents are selected to be both at the right place and time (Malhotra, 2006, p.333). In addition, quota

sampling techniques provide at relative low cost and least time consuming on collecting the data and it create the greater convenience to select element for each quota (Malhotra, 2006, p.337).

3.4.5 SAMPLING SIZE

Sample size refers to the number of the elements to be included in the study (Malhotra, Hall, Shaw, & Oppenheim, 2002). 100 sample size and 20 pilot test sample is prepared for this research within allowable time and other resource constraints. The quantity sample size and pilot test are accordingly fulfilling the survey requirement. Hence, 100 sample sizes in total will be distributed to respondents that are working in project environment for MNC in Malaysia.

Besides that, total 20 pilot test sample will be carried out before distributing a formal survey to the consumer. The purpose to pretest the questionnaire is to obtain significant feedback or revises from the respondents, because they might help to identifying anything difficulty or confusing word within the questionnaire.

3.5 RESEARCH INSTRUMENT

Instruments used in this study is questionnaire which is self-administered. According to Burns & Bush (2006, p. 241), self-administered survey is a data collection in which the respondent reads the questions and completes the survey on his or her own answers without the presence of interviewer or computer assistance. The questionnaire was developed based on the literature reviewed with the objective to examine the relationship of transformational, transactional, and laissez-faire leadership style toward virtual team project success.

3.5.1 THE PURPOSE OF USING QUESTIONNAIRE

Typically, questionnaire is used to obtain feedback from the respondents through the questions created (Burns & Bush, 2013). The research objective is translated into specific questions that are asked to the respondents plus offer standardization to all respondent's reaction to the survey will be the purpose of using questionnaire (Burns & Bush, 2013). Plus, questionnaire offer better efficiency for analysis of data processing and better control on quality by the researcher.

3.5.2 QUESTIONNAIRE DESIGN

Questionnaire offers options for the respondents to choose their response from close-ended question, scale points or response options (Burns & Bush, 2013). English as international language which is widely practiced and recognized, is used as a communication medium with the respondents. The survey instrument need to be carefully considered to have the required quantitative data collection and data analysis. The primary goal is to provide the intended measurement with the survey and the data collected (Creswell, 2011). With this put into consideration meaningful conclusions should be attainable.

Multifactor Leadership Style is currently a quantitative study to examine and measure the relationship between leadership styles (Bass, Avolio, Jung, & Berson, 2003) and project success in virtual project teams as measured by the Project Implementation Profile (PIP) (Pinto & Slevin, 1988). An anonymous three-part survey, consisting of a series of questions pertaining to respondent demographics included in Part A, the PIP included in Part B, and the MLQ included in Part C, provided the necessary research data for each of the variables.

Measurement of central tendency like mean, median, and mode is descriptive statistic (Leedy & Ormrod, 2004). Data necessary to present a descriptive statistic for respondents experience in project management, scope of project, complexity of the project, the tools used for collaboration in the project is collected in the demographic instrument Part A. Raw data is described by researcher using descriptive statistic.

In Part B, the PIP instrument provided a measurement of project success in a particular virtual project identified by the survey respondent. There is rare notion on project success agreement in a few topics in project management (Pinto & Slevin, 1988). Three factors of time, project performance, and budget is considered to measure project success. A successful project is performs as expected, delivered on time and within budget. Pinto & Slevin (1988) added an additional factor to the measurement of success: accounting for the satisfaction and welfare of the client. The client is any party the project is for, either internal or external to the organization. Hence this model of project success includes budget, schedule, performance, and client satisfaction.

In Part C, the MLQ is a Likert scale questionnaire tool to measure transformational, transactional, and laissez-faire leadership styles. The MLQ contains 45 items identifying and measuring key leadership and effectiveness behaviors shown in prior research to be strongly linked with both individual and organizational success. Avolio & Bass (2004) concludes that the MLQ scores can help to account for the varying impact different types of leaders have on their associates, teams, and organizations.

3.6 CONSTRUCT MEASUREMENT

3.6.1.1 MULTI FACTOR LEADERSHIP QUESTIONNAIRE

The MLQ is a comprehensive and short survey which is used extensively worldwide. It has validity and reliability which is excellent (Heinitz, Liepmann, & Felfe, 2005). The survey includes 45 items on a full range that measures of leadership styles. Avolio & Bass (2004) reported that MLQ was used around the world to determine leadership style through nearly three hundred research programs, master's theses, and doctoral dissertations from year 1995 to year 2004. By employing a hierarchical measurement of leadership behaviors or a full range of leadership, the MLQ shows reliability for different levels within an organization and for varying types of organizations, from civilian to military (Heinitz, Liepmann, & Felfe, 2005).

When the measure repeatedly can produce the same results, it means reliability which also refers to dependability of measure (Neuman, 2009). The reliability is determined when the entity has not changed and an instrument consistently yields a certain result (Leedy & Ormrod, 2004). Avolio & Bass (2004) reported the reliability scores measured by the MLQ for the transformational behaviors as idealized influence (attribute) is 0.70, idealized influence (behaviors) is 0.64, inspirational motivation is 0.76, intellectual stimulation is 0.64, and individual consideration is 0.62. MLQ score range from 0.60 to 0.79 measures transactional behaviours. Heintiz et al. (2005) has found that the current version of the MLQ survey is psychometrically solid after several studies has been conducted to assess the validity and reliability of the 1999 version of the MLQ.

3.6.1.2 PROJECT IMPLEMENTATION PROFILE

The Pinto and Slevin (1988) PIP is considered the best current measurement of project success in the field (Jugdev & Muller, 2005). The PIP generalizes project success and includes two subscales: project and client. A project score, client score, and overall score relate to a database

of 418 projects. Scores found to be below the 50th percentile indicate less than successful areas in the project (Pinto & Slevin, 1988).

3.6.2 DATA SCALE OF MEASUREMENT

Measurement is by assigning numbers to a variable per certain rules. The characteristics of phenomenon being measured must be reflected by the assigned number. Another tool or mechanism, a scale, in which an intended characteristic of an item can be measured. The result can be directional or categories. There are four types of scales, which are nominal scale, ordinal scale, interval scale, and ratio scale.

Questionnaire is a formalized set of question to obtain information from respondents. The questionnaire of this study is divided into three major sections; Part A (General Information), Part B (PIP) and Part C (MLQ). Part A, which consists of three questions, is designed with a combination of nominal scale and interval scale. Nominal scale is used to identify personal information and project information in Part A except questions three that used Interval scale to rate respondents' likely to be involved in virtual project setting.

Interval scale being used in part B to measure respondent's opinion for virtual team project success. Items for variables include attitudes virtual project team success are measure using seven-point Likert scale ranged from (1) Strongly Disagree to (7) Strongly Agree.

Section C, the final part of the questionnaire, consists of forty five questions according to MLQ which measuring leadership characteristic are measure using seven-point Likert scale ranged from (0) Strongly Disagree to (4) Strongly Agree. This section part is to further identify the respondents' personal information to assist in analyzing the responses if the apply transformational, transactional, or laissez-faire leadership style.

3.7 DATA PROCESSING

According to Hair et al. (2002), the process for information that can be transfer to a data warehouse after conversion is called data preparation. During design phase, the preliminary plan will guide the formulation for the complete process of data preparation (Malhotra, Hall, Shaw, & Oppenhiem, 2002). Checking for acceptable questionnaire as step number one, editing as step

number two, coding as step number four, transcribing the data as step number five, ends with data cleaning and missing responses treatment (Malhotra, Hall, Shaw, & Oppenheim, 2002).

According to Malhotra et al. (2002), adjustment to the data is important in order to allow them to represent the population of interest. Upon receive the first batch of questionnaire from the field data preparation should proceed immediately, concurrently on going field work is reviewed to detect if any problem, and incorporate corrective action for necessary modification (Malhotra, Hall, Shaw, & Oppenheim, 2002).

3.7.1 QUESTIONNAIRE CHECKING

For questionnaire checking, the first step involves a full check for questionnaire's completeness and quality interview, and field work is still underway in tandem (Malhotra, Hall, Shaw, & Oppenheim, 2002). Before data is edited, problems to meet the sampling requirement if identified with corrective action planned (Malhotra, Hall, Shaw, & Oppenheim, 2002).

3.7.2 EDITING

According to Malhotra et al. (2002), the objective to review the questionnaire if increasing accuracy and precision is called editing. Screening the questionnaire to identify illegible, inconsistent, ambiguous, or incomplete responses is part of the process for editing (Malhotra, Hall, Shaw, & Oppenheim, 2002).

3.7.3 CODING

To assign a code which is usually a number to each possible response to each question which indicates column position (field) and occupying of data recorded, is called coding (Malhotra, Hall, Shaw, & Oppenheim, 2002).

3.7.4 TRANSCRIBING

Transfer coded data from questionnaires or coding sheets onto computers hard drive by punching key is called transcribing data (Malhotra, Hall, Shaw, & Oppenheim, 2002). In this research project, to transcribe the Statistical Project for Social Science Version 22.0 (SPSS software version 22) will be used.

3.7.5 DATA CLEANING

Action to identify out of range data, logical inconsistent or having extreme value, which are not admissible but need to be corrected, are called consistency checks (Malhotra et al., 2002, p.445). Upon consistency check, the data is cleaned by treating missing responses is treated, is called data cleaning (Malhotra et al., 2002, p. 446).

3.8 DATA ANALYSIS

To analyze the data, Statistical Package for Social Sciences (SPSS version 22) software was used immediately after completion of data collection.

3.8.1 DESCRIPTIVE ANALYSIS

According to Burns & Bush (2006, p.424), to describe the variables for question responses in a data matrix for all respondent's answer is called descriptive analysis. Frequency analysis assist to provide summary for the information to be presented in a form called frequency table (Aaker et al 2008, p. 438). Descriptive analysis will calculate descriptive statistic summary, for example mean or percentages (Aaker et al., 2008, p. 436). Mean is the average number (Aaker et al., 2008, p. 438). The statistics of descriptive summary will be presented as mean, range and percentage in this study as a foundation for further analysis. Summarizing the dependent and independent variable into descriptive analysis with the objective to provide meaningful, accurate, and simple figures.

3.8.1.1 FREQUENCY DISTRIBUTION

Frequency distribution is the experimental determination of the variable that is reporting the responses to each question received (Aaker et al., 2007, p. 437). For straightforward comparison of the variables, frequencies which are raw counts, is normally converted into percentages (Burns & Bush, 2006, p. 432). The percentage will breakdown into the various categories, and express these variables in the percentage terms. Besides that, the frequency distribution of the variable will be visualized through the bar graph or histogram in this study. The objective is to obtain a count of the number of responses associated with different values of the variable (Malhotra, 2006, p.444). Hence, summary of demographic information from the questionnaires returned by respondents will be presented by frequency distribution.

3.8.2 SCALE MEASUREMENT

3.8.2.1 RELIABILITY TEST

Reliability measure is one for which a respondent responds in the same or in a very similar manner to an identical or near-identical question (Burns & Bush, 2006, p. 290). If the scores for repeated application result and concerned for the research finding is both consistent, it is then considered reliable (Malhotra, 2006, p.276). This test is a verification of the questionnaire if there are relation to each other or vice versa. Examination for the measurement scale reliability is called reliability test of Cronbach's Alpha where analysis of the scales in term of reliability by the means of the internal consistency.

According to the Sekaran (2003), the reliability is considered poor with Cronbach's Alpha coefficient which less than 0.6, reliability is considered moderate with Cronbach's Alpha coefficient test value that is in the range of 0.6 to 0.7, reliability is considered good with Cronbach's Alpha coefficient test value that is in the range of 0.7 to 0.8, reliability is considered very good with Cronbach's Alpha coefficient test value that is in the range of 0.8 to 0.9, and reliability is considered excellent is Cronbach's Alpha coefficient more than 0.9. The evaluation of the Cronbach's Alpha coefficient is based on the rules of the thumb below:

Table 1: Cronbach's Alpha coefficient range and strength of association

Association Strength	Range of Alpha Coefficient
Poor	< 0.6
Moderate	0.6 to < 0.7
Good	0.7 to < 0.8
Very good	0.8 to < 0.9
Excellent	0.9 and above

3.8.3 INFERENCE ANALYSIS

Inference analysis is used to generate conclusions about the population's characteristics based on the sample data (Burns & Bush, 2013). Correlation Analysis and Multiple Regression Analysis is the chosen statistical tests with two rational as below section.

3.8.3.1 PEARSON'S CORRELATION ANALYSIS

The Pearson correlation coefficient measures the degree of linear association (relationship) between two variables (Burns & Bush, 2013, p. 544). According to the Aaker et al. (2008, p. 509) the positive correlation reflects a tendency for a high value in one variable to be associated with a high value in the second variable. A negative correlation reflects an association between a high value in one variable and low value in the second variable.

In this study, Pearson's correlation coefficient is used to measure the co-variation or associations between dependent variable (project success of virtual teams) and independent variables (transformational leadership style, transactional leadership style, and laissez-faire leadership style). Interpretation for the results of the variables by relationship significance between two or more variable are important.

Besides that, Coefficient (r) indicates both the degree of the linear relationship and the direction of the relationship. If the value of correlation coefficient equal to 1.0, there are perfect positive linear relationship (Aaker et al., 2008). Whereas, if the value of correlation coefficient equal to -1.0, it indicates there are perfect negative linear relationship (Aaker et al., 2008). Furthermore, if the result falls between -1.0 and +1.0, there is a significant relationship between both variable (Aaker et al., 2008). Hence, H_1 is supported and H_0 is rejected. Moreover, if there is a zero value, it means there are no associations between the two variables, and (H_0) is supported and (H_1) is rejected (Aaker et al., 2008).

On the other hand, according to Zikmund (2003), the output of the Correlation analysis is presented in term of P-value. If the level of significant (α) is 0.05 which mean that the confidence interval ($1-\alpha$) is 95%. If P-value less than 0.05 ($P < 0.05$), reject H_0 and support H_1 . This indicates there is a significant relationship between both variables. However, if the P-value is more than 0.05 ($P > 0.05$), support H_0 and reject H_1 . Therefore, there is no significant relationship between both variable.

Once the result showed the relationship is statistically significant, researchers must identify the acceptable strength of the association. The size of correlation coefficient is use to quantitatively illustrate the strength of the association between two variable (Burns & Bush, 2013). According to Burn & Bush (2013), the rules of thumb about correlation coefficient to characterize the strength of the association between variable are summarize in table 2 below.

Table 2: Rules of thumb about Correlation Coefficient Size

Coefficient Range	Strength of Association
$\pm 0.81 - \pm 1.00$	Strong
$\pm 0.61 - \pm 0.80$	Moderate
$\pm 0.41 - \pm 0.60$	Weak
$\pm 0.21 - \pm 0.40$	Very weak
$\pm 0.00 - \pm 0.20$	None

3.8.3.2 MULTIPLE REGRESSION ANALYSIS

The use of regression equation for analysis to predict a single dependent variable with more than one independent variables is called multiple regression (Burns & Bush, 2013). The assumption that a straight-line relation existed between the variable forms the basis of this technique (Burns & Bush, 2013). According to Hair et al. (2002) multiple regression analysis is a statistical technique which analyzes the linear relationship between a dependent variable and independent variables by estimating coefficients for the equation and for a straight line. The multiple regression equation form is as below

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 \dots + b_mx_m$$

Equation;

$$A = a + b_1\text{TransFL} + b_2\text{TransSL} + b_3\text{LaizzEF}$$

Where

TransFL = Transformational leadership style

TransSL= Transactional leadership style

LaizzEF = Laizzes-Faire leadership style

With multiple regression, the underlying conceptual model specifics that several independent variable are to be used, and it is necessary to determine which one are significant (Burns & Bush, 2013). It helps researcher to clearly identify which independent variables have great impact on the dependent variable. In addition, determination of the results in this study is based on five basic questions used; the relationship strength; if relationship is skewed positively or negatively; best description for the relationship and the best means to fit the data into a straight line.

3.9 CONCLUSION

Chapter 3 will continue to chapter 4 and both are interrelated. Analysis of the samples responses with the results will be continue in Chapter 4. This research will conclude with interpretation of the results and also further discussion in Chapter 5.

4 CHAPTER 4: ANALYSIS OF RESULTS

4.1 INTRODUCTION

In the previous chapter, which is chapter three, methodology, the purpose of quantitative study to examine the relationship between the independent variables and dependent variable are presented to how it can act as the foundation to proceed with this chapter. The chapter will focus to reports the results of the statistical analysis of the examined relationship. The interpretation of the results of hypotheses are all included in this chapter four.

4.2 DEMOGRAPHIC DATA

The target population for the study included 100 adults working in a MNC company in Malaysia. The entire population of 100 working adults received and informed consent form in a type of email (see Appendix – Questionnaire Survey), a demographic questionnaire (see Appendix - Questionnaire Part A – Demographics), the PIP (see Appendix - Questionnaire Part B – PIP), and the MLQ (see Appendix - Questionnaire Part C – MLQ) by way of email. The email included a direct link that directly bring the respondances to Google Form page which contains all three questionnaires, in which they can complete the anonymous questionnaire for data collection and analysis. No respondent's identification information is included in all questionnaire to ensure confidentiality. The sample includes all 100 respondents from the target population of one hundred working adults. The response rate achieved confidence level of 0.95 and a margin of error of 0.05 is consistent with 100 responses needed.

The data collected from the three-part questionnaire is then downloaded from Google Form into spreadsheet software application Microsoft Excel. This data was then imported into the statistical software application SPSS to perform correlational and multiple regression analysis. A 2-step analysis process provided the results necessary to determine findings and make conclusions. First data from Questionnaire Part A – Demographics provided a detailed description of the sample. Second, analysis of the data from Questionnaire Part B – PIP and Questionnaire Part C – MLQ provided the primary research data to test the hypothesis.

Organizing findings by a common structure related to the research questions or hypothesis provide an understanding of the data collected (D. Leedy & Ormrod, 2012). A two-step analysis process provides the results necessary to determine the finding and make conclusion.

Questionnaire Part A – Demographic provide a detailed description of the sample. This followed by data analysis from Questionnaire Part B – PIP and Questionnaire Part C – MLQ that provide the primary research data required to test the hypothesis.

4.3 DESCRIPTIVE ANALYSIS

The sample included all 100 respondents from the target population of 100 adults working in local MNC. Questionnaire Part A – Demographics, which contains two part, collected demographic information to describe personal and project characteristic of the sample.

The first part collect information such as gender, years of experience in general project management, years of experience in general project management in virtual setting, education level, is current project management in virtual setting, project geographic region, size of project team member, project planned schedule, project budget, is the project team located in different time-zone and organizational type. Summary is per table 3 below.

Table 3: Summary of respondent demographic information

Statistics												
		Male or female	General project management experience	General project experience in virtual setting	Education level	Is current project in virtual setting	Project scope in geographical region	The team size of project team	Project planned schedule	Project budget	Different between project team member in time zone	Organizational type
N	Valid	100	100	100	100	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0	0	0	0	0
Median		1.00	2.00	2.00	2.00	1.00	2.00	2.00	3.00	4.00	1.00	1.00
Mode		1	1	1	2	1	1	3	3	4	1	1
Std. Deviation		.469	1.825	1.352	.608	.499	.904	.916	.971	1.330	1.022	.494
Skewness		.784	.569	.861	.309	.245	.020	-.101	-.401	-.692	.618	.372
Std. Error of Skewness		.241	.241	.241	.241	.241	.241	.241	.241	.241	.241	.241
Kurtosis		-1.415	-1.065	.143	.209	-1.980	-1.794	-1.638	-1.546	-1.401	-1.215	-1.900
Std. Error of Kurtosis		.478	.478	.478	.478	.478	.478	.478	.478	.478	.478	.478

Figure 3 shows that most respondents is male with 68% and female with 32%. Per figure 4, the mean general project experience is 6 to 10 years (mean score = 2.94 with standard deviation of 1.825) and the variable general project management positively skewed distribution as indicated by the Skewness coefficient.

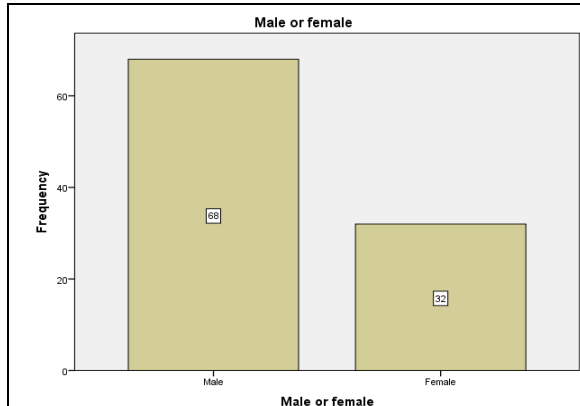


Figure 3: Gender

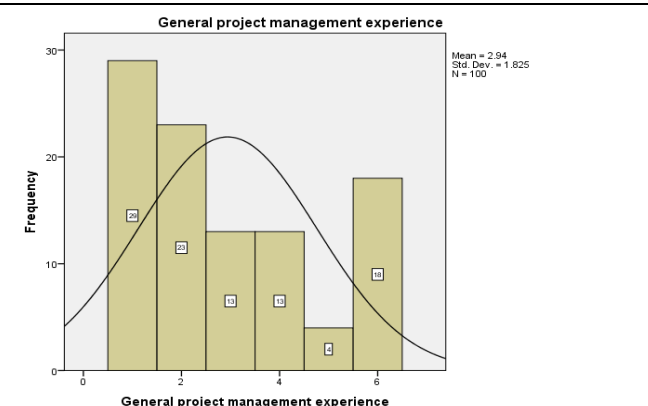


Figure 4: General project management experience

Per figure 5, the mean general project experience in virtual setting is 1 to 5 years (mean score = 2.30 with standard deviation of 1.352) and the variable general project management slightly positively skewed distribution as indicated by the Skewness coefficient. Per figure 6, the mean education level is Bachelor (mean score = 2.29 with standard deviation of 0.608) and the variable education level positively skewed distribution as indicated by the Skewness coefficient.

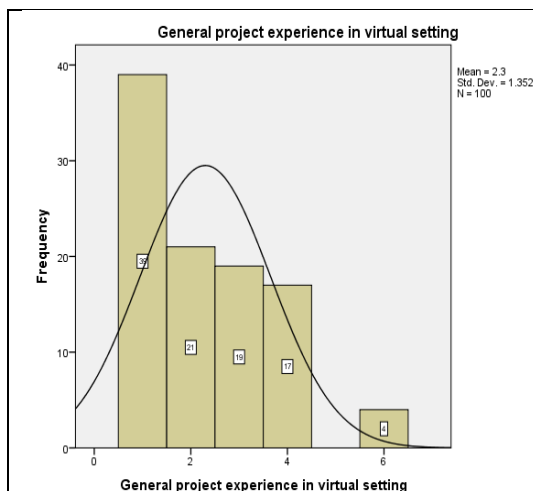


Figure 5: General project experience in virtual setting

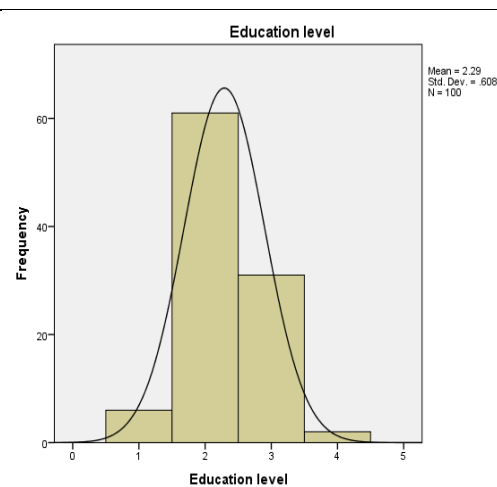


Figure 6: Education level

Figure 7 shows 56% of respondent current project in virtual setting and 44% of respondent current project is not in virtual setting. Per figure 8, the mean project scope is national (mean score = 1.99 with standard deviation of 0.904) and the variable project scope is slightly positively skewed distribution as indicated by the Skewness coefficient.

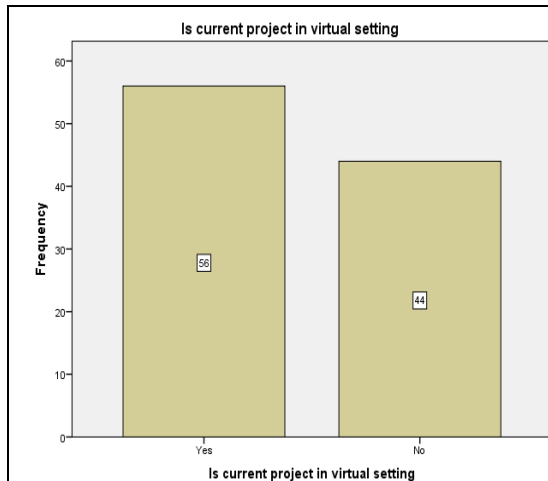


Figure 7: Current project in virtual setting

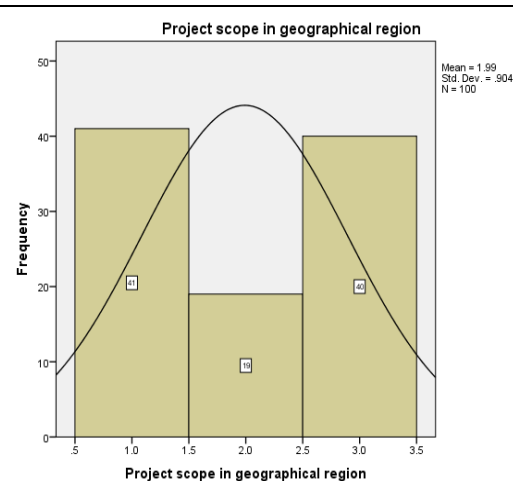


Figure 8: Project scope in geographic region

Per figure 9, the mean size of project team is 6 – 15 people (mean score = 2.01 with standard deviation of 0.916) and the variable general size of project team slightly negatively skewed distribution as indicated by the Skewness coefficient. Per figure 10, the mean project schedule is 7 – 12 months (mean score = 2.13 with standard deviation of 0.971) and the variable project schedule negatively skewed distribution as indicated by the Skewness coefficient.

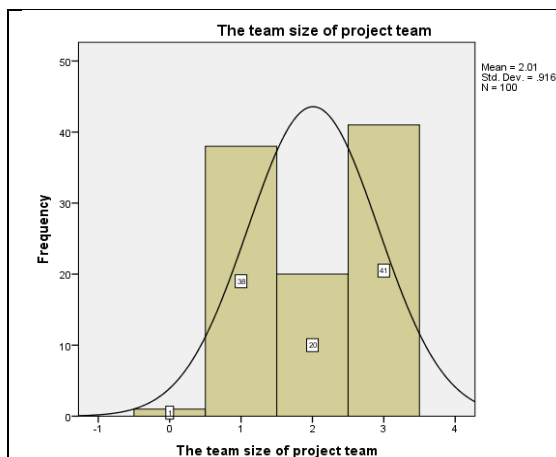


Figure 9: The size of project team

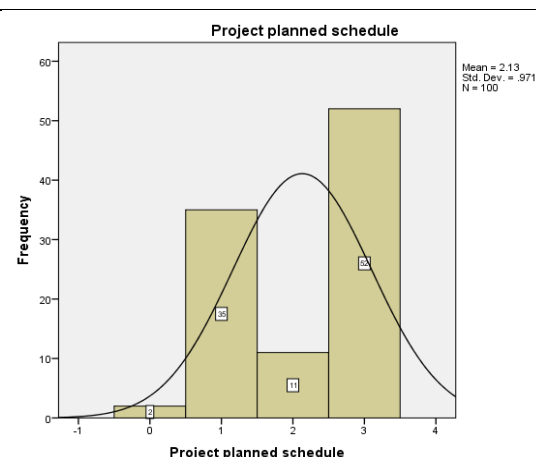


Figure 10: Project schedule

Per figure 11, the mean project budget is RM250,000 – RM500,000 (mean score = 2.99 with standard deviation of 1.33) and the variable project budget positively skewed distribution as indicated by the Skewness coefficient. Per figure 12, the mean time zone between team member is minimum of 3 hours (mean score = 1.84 with standard deviation of 1.022) and the variable time zone between team member positively skewed distribution as indicated by the Skewness coefficient.

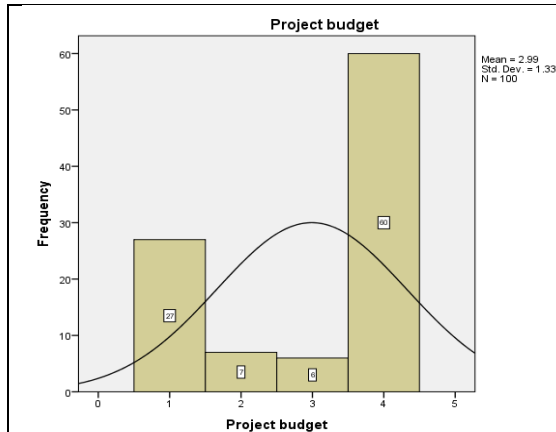


Figure 11: Project budget

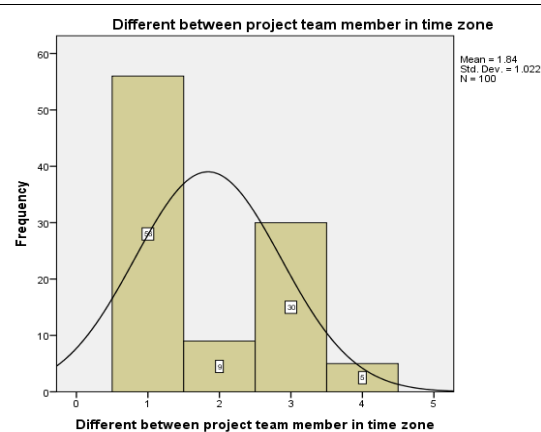


Figure 12: Team member time zone different

Finally, per figure 13, 59% of the respondent's project consist of team member of single organization and 41% respondents project consist of team member of two or more organization.

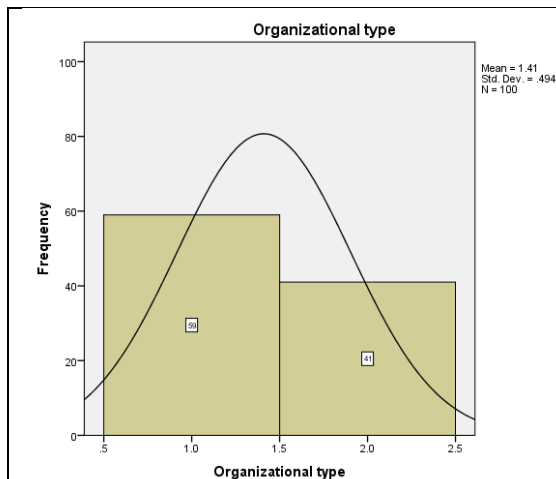


Figure 13: Organizational type

The second part collect information for the frequency of usage for virtual setting tools, such as video conference, email, voice mail, telephone, web-based intranet, electronic meeting system, and instant messaging. Summary as per table 4 below. Virtual tools such as email and telephone represents the most frequent tools used by the sample with both with mode = 5.00 (almost always). In contrast, virtual tools such as video conferencing, voice mail, web-based intranet tools, electronic meeting system are less frequent tools used by the sample with mode = 1.00 (never).

Table 4: Summary of respondent virtual setting tools,

Statistics							
		How often do you personally use video conferencing to work with team members on the project?	How often do you personally use email to work with team members on the project?	How often do you personally use voice mail to work with team on the project?	How often do you personally use the telephone to work with the team members on the project?	How often do you personally use Web-based intranet tools to with team members on the project?	How often do you personally use an electronic meeting system to work with team members on the project?
N	Valid	99	100	100	100	99	99
	Missing	1	0	0	0	1	0
Median		2.00	5.00	1.00	5.00	3.00	4.00
Mode		1	5	1	5	1	1
Std. Deviation		1.522	.427	1.330	.821	1.608	1.663
Skewness		.602	-3.200	1.266	-2.841	.073	-.205
Std. Error of Skewness		.243	.241	.241	.241	.243	.241
Kurtosis		-1.196	9.938	.221	8.398	-1.603	-1.641
Std. Error of Kurtosis		.481	.478	.478	.478	.481	.478
Minimum		1	3	1	1	1	1
Maximum		5	5	5	5	5	5

4.4 FREQUENCY DISTRIBUTION

4.4.1 DESCRIPTIVE STATISTIC

Table 5: Description of variables

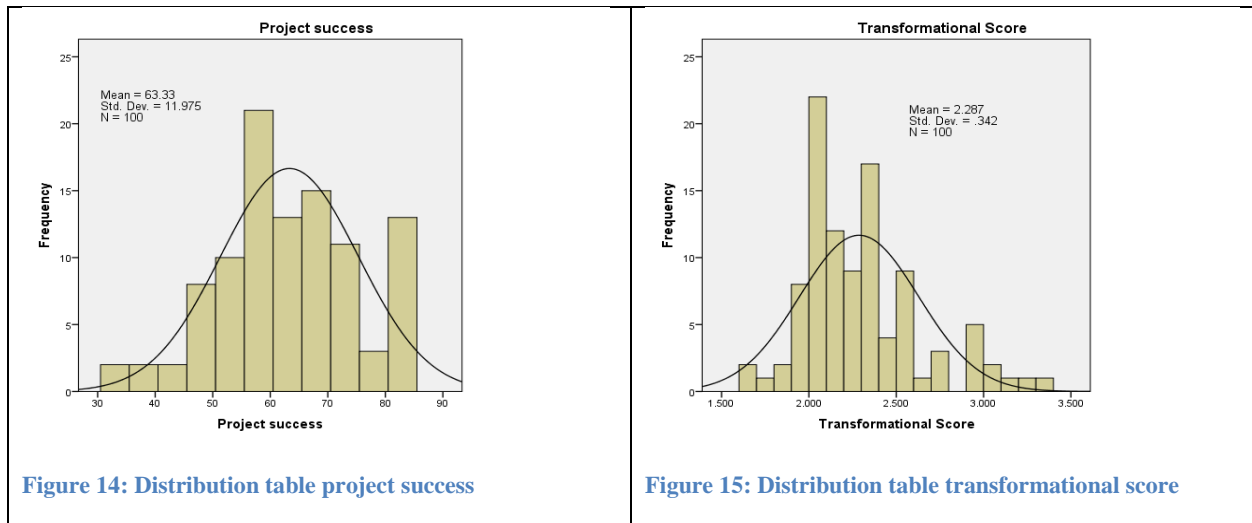
	<u>Name</u>	<u>Type</u>	<u>Width</u>	<u>Decimals</u>	<u>Label</u>	<u>Align</u>	<u>Measure</u>
1	projscore	Numeric	8	0	Project success	Right	Ordinal
2	mlqlf	Numeric	8	2	MLQ (LF) Laissez-faire leadership	Right	Scale
3	transformational	Numeric	8	3	Transformational Score	Right	Scale
4	transactional	Numeric	8	3	Transactional score	Right	Scale

Table 5 above present the description and the data set of the output. If the score is below the 50th percentile on any factor, devotion for extra attention to that factor is desirable (Pinto J. , 1990). Table 6 below provide the number of frequency descriptive statistic for 100 samples.

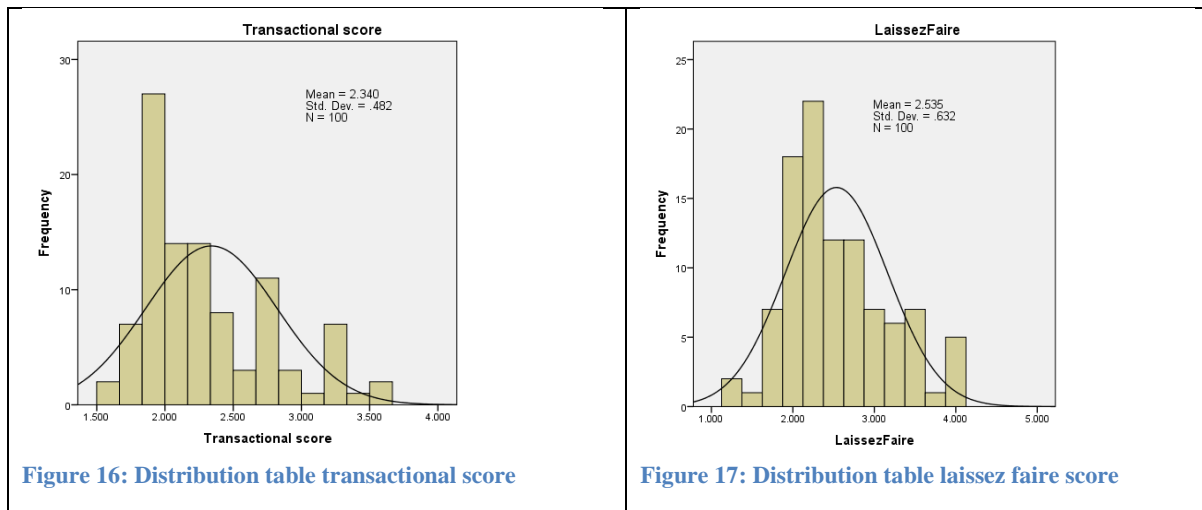
Table 6: Sample for project success

		Statistics			
		Transformational Score	Transactional score	LaissezFaire	Project success
N	Valid	100	100	100	100
	Missing	0	0	0	0
Mean		2.28729	2.34000	2.53500	63.33
Mode		2.000	2.000	2.250	60
Std. Deviation		.341834	.481953	.631676	11.975
Variance		.117	.232	.399	143.395
Skewness		.988	.935	.606	-.058
Std. Error of Skewness		.241	.241	.241	.241
Kurtosis		.750	.255	-.122	-.308
Std. Error of Kurtosis		.478	.478	.478	.478
Minimum		1.688	1.583	1.250	33
Maximum		3.333	3.667	4.000	84
Percentiles	25	2.01563	2.00000	2.00000	56.00
	50	2.22917	2.20833	2.37500	62.00
	75	2.42448	2.64583	3.00000	72.00

Per figure 14, the mean project success score is 63.33 with standard deviation of 11.975 and the variable project success slightly positively skewed distribution as indicated by the Skewness coefficient. Per figure 15, the mean transformational score is 2.287 with standard deviation of 0.342 and the variable time zone between team member slightly negatively skewed distribution as indicated by the Skewness coefficient.



Per figure 16, the mean transactional score is 2.340 with standard deviation of 0.482 and the variable transactional score slightly negatively skewed distribution as indicated by the Skewness coefficient. Per figure 17, the mean laissez-faire score is 2.535 with standard deviation of 0.632 and the variable laissez-faire slightly negatively skewed distribution as indicated by the Skewness coefficient.



4.4.2 RELIABILITY TEST

Per table 8 below, the Cronbach's Alpha = 0.848 is considered very good strength of association (by refer to table 2 above). Per table 9 below, the significance value is 0.000 ($\beta = 0.000 < 0.050$) and therefore there is statistically significant difference between project success and leadership style. Hence there was a statistically significant difference between leadership score as determined by one-way ANOVA ($F(2,70) = 33.568, p = 0.000$).

Table 7: Reliability statistic

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.848	.876	3

Table 8: ANOVA table

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig
Between People	20.592	35	.588		
Within People					
Between Items	6.008	2	3.004	33.568	.000
Residual	6.264	70	.089		
Total	12.272	72	.170		
Total	32.864	107	.307		

Grand Mean = 2.6897

4.4.3 INFERENCE ANALYSIS

4.4.3.1 PEARSON'S CORRELATION ANALYSIS

A Pearson correlation analysis was conducted to examine whether there is a relationship between leadership style of transformational, transactional, and laissez fair and virtual project success. If you are below the 50th percentile on any factor, you may wish to devote extra attention to that factor (Pinto J. , 1990). A range of 67 to 84 on the PIP total score define the project performance as good (Pinto & Slevin, 1988). Hence score range of 67 to 84 of PIP total score will consider the project as successful. The MLQ used a range of 0 to 4 to rate the leadership style. Table 6 below provide the number of respondent with PIP scores that consider the project is

successful. A new ordinal variable is created for this purpose, projectsuccessscore. For PIP scores, which is 66 and below, projectsuccessscore value is 0 and 1 if PIP score is 67 and above. A new Descriptive statistic as per table 10 below after considering cases for projectsuccessscore is 1, which consider the project as successful.

Table 9: Descriptive Statistic

Descriptive Statistics^a

	Mean	Std. Deviation	N
Project success	76.53	5.915	34
Transactional score	2.64216	.523251	34
LaissezFaire	3.04412	.595025	34
Transformational Score	2.44485	.347205	34

a. Selecting only cases for which projectsuccessscore > .00

Per table 11, there is a significant and positive relationship ($r = 0.690$, $N = 34$, $p = 0.00 < 0.05$) between transformational leadership style and virtual project success. The correlation was moderate (per table 2 above) in strength. Higher score of transformational leadership score were associated with high virtual project success score. There is a significant and positive relationship ($r = 0.565$, $N = 34$, $p = 0.00 < 0.05$) between transactional leadership style and virtual project success. The correlation was weak (per table 2 above) in strength. Higher score of transactional leadership score were associated with high virtual project success score. Finally, there is a significant and positive relationship ($r = 0.503$, $N = 34$, $p = 0.01 < 0.05$) between Laissez faire leadership score and virtual project success. The correlation was weak (per table 2 above) in strength. Higher score of Laissez faire leadership style were associated with higher virtual project success score.

Table 10: Pearson correlations output

		Correlations ^a		
		Project success	Transactional score	LaissezFaire
Pearson Correlation	Project success	1.000	.565	.503
	Transactional score	.565	1.000	.669
	LaissezFaire	.503	.669	1.000
	Transformational Score	.690	.734	.716
Sig. (1-tailed)	Project success	.	.000	.001
	Transactional score	.000	.	.000
	LaissezFaire	.001	.000	.
	Transformational Score	.000	.000	.000
N	Project success	34	34	34
	Transactional score	34	34	34
	LaissezFaire	34	34	34
	Transformational Score	34	34	34

a. Selecting only cases for which projectsuccessscore > .00

The statistical analysis performed in table 11 provided necessary findings to answer the research questions to accept or reject the null hypothesis. The research question is which leadership style correlates with a higher level of virtual project team success for multinational companies in Malaysia.

The results revealed a significant and positive relationship between transformational leadership style and virtual project team success ($r = 0.517$, $N = 100$, $p = 0.00 < 0.05$), with weak correlation strength and the null hypothesis H_{10} rejected. Higher scores of transformational leaderships style was associated with higher levels of virtual project team success.

The results revealed a significant and positive relationship between transactional leadership style and virtual project team success ($r = 0.614$, $N = 100$, $p = 0.00 < 0.05$), with weak correlation strength and the null hypothesis H_{20} rejected. Higher scores of transactional leadership style was associated with higher levels of virtual project team success.

The results revealed a significant and positive relationship between laissez-faire leadership style and virtual project team success ($r = 0.650$, $N = 100$, $p = 0.00 < 0.05$), with weak correlation

strength and the null hypothesis H3₀ rejected.. Higher scores of laissez-faire leaderships style was associated with higher levels of virtual project team success.

4.4.3.2 REGRESSION ANALYSIS

Regression analysis are used to examine the effect of the different independent variables on a single outcome dependent variables, with the term “prediction” is the central to regression analysis. Multiple regression, which is more popular extension of linear regression, examines the effects of multiple independent variables (transformational leadership style, transactional leadership style, and laissez faire leadership style) on a single dependent variable (virtual project success).

Table 11: Coefficient table

	Unstandardized Coefficients		Standardized Coefficients	Collinearity Statistics			
	B	Std. Error	Beta	t-stat	p-value	Tolerance	VIF
(Constant)	47.886	5.519		8.677	0.000		
Transformational score	10.352	3.687	0.608	2.815	0.009	0.369	2.710
Transactional score	1.500	2.290	0.133	0.655	0.517	0.419	2.835
Laissez-faire score	-0.207	1.960	-0.021	-0.106	0.917	0.422	2.260
R							
(projectsuccess > 0.00					0.696		
R							
(projectsuccess > 0.00					0.368		
R ²					0.484		
Adjusted R ²					0.432		
F statistic				9.376	0.000		

Note: Developed for the research

Predictors: (Constant), Transformational Score, LaissezFaire, Transactional score_a

Unless noted otherwise, statistics are based only on cases for which project success score > .00.b

Dependent Variable: Project success_c

Coefficient of multiple determination (R square or R²) in the regression shows the percentage of independent variables in explaining the dependent variable in the model. Per table 12, R² is 0.432, or 43.2% if the variance in virtual team project success for multinational in Malaysia is significantly explained by transformational leadership score, transactional leadership score, and laissez-faire leadership score. In other words, the independent variables selected for this study are adequate.

Besides, the result indicates that the model is very significant as shown by the F-value of 9.376 and the p-value less than 0.001. Thus, it is to be interpreted that the model is good to predict dependent variables by the independent variables, as those selected independent variables do have effect on virtual team project success for multinational in Malaysia.

Multicollinearity

As a rule of thumb, when tolerance is below 0.20, variance inflation factors (VIF) is beyond 4.00, a problem with multicollinearity is indicated (Garson, 2017). The multicollinearity statistics per table 12 shows that the tolerance indicator for transformational leadership score, transactional leadership score, laissez-faire leadership score is all greater than 0.2 and VIF are all lesser than 4.0, thus indicate no multicollinearity problems occur.

Standardized Coefficients

Per table 12, all Beta value (forth column) are low than 1. Transformational leadership score is the highest with 0.608 ($p = 0.009 < 0.05$) and thus statistically significant. Therefore, hypothesis H1₀ is rejected.

H1₀: The project manager's leadership style of transformational leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H1_a: The project manager's leadership style of transformational leadership will lead to success of virtual team projects for Malaysia multinational company,

Transactional leadership score and Laissez-Faire leadership score with Beta value 0.133 ($p = 0.517$) and -0.021 ($p = 0.917$) respectively, is both not statistically significant ($p > 0.05$). There, both hypothesis H2₀ and H3₀ is not rejected.

H2₀: The project manager's leadership style of transactional leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H2_a: The project manager's leadership style of transactional leadership will lead to success of virtual team projects for Malaysia multinational company,

H3₀: The project manager's leadership style of laissez-faire leadership does not lead to the success of virtual team projects for Malaysia multinational company,

H3_a: The project manager's leadership style of laissez-faire leadership will lead to success of virtual team projects for Malaysia multinational company,

Unstandardized Coefficients

The unstandardized coefficients (B) are also known as regression coefficient. Regression coefficient slope is used to form an equation that bring together the selected predictors to estimate the dependent variables. Per table 12, the regression equation formed for this research is:

Equation;

$$A = 47.886 + 10.352\text{TransFL}$$

Where

TransFL = Transformational leadership style

Table 12: Anova table

ANOVA ^{a,b}						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	558.652	3	186.217	9.376	.000 ^c
	Residual	595.819	30	19.861		
	Total	1154.471	33			

a. Dependent Variable: Project success

b. Selecting only cases for which projectsuccessscore > 0.00

c. Predictors: (Constant), Transformational Score, LaissezFaire, Transactional score

Table 13 shows whether the proportion of the variance in table 12 is significant. It also tells whether the overall virtual project success is significant. The significant value 0.000 (or $p = 0.00 < 0.05$), hence the overall model is statistically significant, or that the variables have a significant combined effect on the dependent variables.

4.5 SUMMARY

This chapter reported the results of the statistical analysis for the examined relationship. Figure 3 to figure 13 represented a preliminary data analysis of the demographic data. The primary data reflected a general correlation between leadership style and virtual project success for multinational companies in Malaysia. More importantly, the primary data reflected a positive correlation between transformational leadership style and virtual project success for multinational companies in Malaysia. Chapter 5 uses the findings from chapter 4 to reach conclusion, develops implications and develop recommendation for further study.

5 CHAPTER 5: FINDINGS, IMPLICATION AND RECOMMENDATION

5.1 FINDINGS:

Multiple regression was conducted to examine whether transformational leadership style, transactional leadership style, and laissez faire leadership style impact on virtual team project success for multinational companies in Malaysia. The overall model explained 46.2% of variance in overall virtual team project success for multinational companies in Malaysia, which was revealed to be statistically significant, $F(3.181) = 27.47, p = 0.000 < 0.050$.

An inspection of individual predictors revealed transformational leadership style (Beta = 0.068, $p = 0.009 < 0.05$) is statistically significant predictor for virtual project team success for multinational companies in Malaysia. Hence the first hypothesis H10 is rejected. Thus, the project manager's leadership style of transformational leadership will lead to success of virtual project team success for multinational companies in Malaysia.

An inspection of individual predictors revealed transactional leadership style (Beta = 0.133, $p = 0.655 > 0.05$) is not statistically significant predictor for virtual project team success for multinational companies in Malaysia. Hence the first hypothesis H20 is not rejected. Thus, there are no association between transactional leadership style and virtual team project success for multinational companies in Malaysia.

An inspection of individual predictors revealed laissez-faire leadership style (Beta = -0.207, $p = 0.106 > 0.05$) is not statistically significant predictor for virtual project team success for multinational companies in Malaysia. Hence the first hypothesis H30 is not rejected. Thus, there are no association between laissez-faire leadership style and virtual team project success for multinational companies in Malaysia.

There is evidence of statistically significant relationship between transformational leadership style and virtual project success for multinational companies in Malaysia, existed. The statistic analysis provided in Chapter 4 identified transformational leadership style will have a positive impact on virtual team project success for multinational companies in Malaysia. The primary data

also reflect a positive correlation between transformational leadership style and virtual project success for multinational companies in Malaysia.

Transformational leadership is a leadership style that can inspire positive changes in those who follow (Cherry , 2017). Virtual team leaders motivate team member to achieve project objectives to a very great extent and project leaders shared project vision with the team members who motivate them influence strive to achieve their individual targets (Tiri, Ogollah, & Mburu, 2015). Transformational leadership however, by its very nature much more aimed at creating trust among team members and making them trust the leader is a much more natural fit for a virtual team (Van Soest, 2013).

The transactional leadership model limits innovation, personal growth, building sense of team and flexibility (Bass, 1990). Often in a virtual project environment, a transactional approach is appropriate to ensure task completion (Shatz, 2006). Laissez-faire was quickly dismissed as a viable option for any team (Van Soest, 2013). The results for this study is consistent with the finding of previous research. Transformational leadership whose generate commitment among it virtual project team member is a crucial trait that can lead to project success.

5.2 IMPLICATION

The future of any industry will include virtual project teams (Avolio & Yammarino, 2013). The 2016 survey indicates that corporate teams are now almost entirely virtual, and 41% never meet in person (Solomon, 2013). Aligning with globalization, the trend for project team collaborating virtual has been increasing. Malaysia is a net recipient of FDI, which accounts for the majority of inflows into the economy (Handley, 2017). Foreign firms are setting up companies in Malaysia and with the advancement in technology, virtual project team setting will be a future trend moving forward. Hence the conclusion reached may lead to practical leadership strategy and the development of a new leadership model for virtual project teams (George, 2008).

The finding from this study can helps multinational companies in Malaysia by providing insight for the leadership style that can be effective to manage virtual project team with success achievement. Traits and characteristic for a transformational leadership can be a guideline for

multinational companies human resources for training and recruit personal with such leadership style. Furthermore, the finding from this study which associate transformational leadership style with virtual project team success, points towards the importance of motivational and objective driven work-force environment, can be an important cue for the management to anticipate the growth of virtual project team.

A guideline for transformational leader, for example, can be refer from past study (Yukl G. , 1999), as below:

1. Develop a challenging and attractive vision, together with the employees,
2. Tie in the vision to a strategy for its achievement,
3. Develop the vision, specify and translate it to actions,
4. Express confidence, decisiveness and optimism about the vision and its implementation,
5. Realize the vision through small planned steps and small successes in the path for its full implementation,

5.3 LIMITATION AND RECOMMENDATION FOR FURTHER STUDIES

Beside the contributions of this study, some limitations need to be addressed and the results of this research need to be interpreted with caution. Based on the sample size, the significant mediation results in this study is relatively strong, but a larger sample can lead to better significant results at stronger significant level. Plus, invitation to participant with extra condition of exposure in project management and required working with a multinational company within Malaysia. The response for project management experience with median (2.94, per figure 4 above) suggesting that the median experience from the sample is close to 6 ~ 10 years of experience. A sample with more experience in project management will make the results for better.

The composition for this sample represents another potential limitation for this study. The majority participants are male (68%) and female (32%). This result may not be consistent with gender distribution of certified project management globally, (Henderson & Stackman, 2010), which finds that woman is taking up more significant role in project management. The majority participants that is in virtual setting is 56% and not in virtual setting is 44%. Hence, the

generalizability of these findings to project success which is in virtual setting or not, is questionable.

The questionnaire from PIP contain 7 point Likert Scale as compared to MLQ's 5 point Likert Scale. Standardization is not performed with the intention to claim the reliability and validity for the published scales, hence the original scales of PIP and MLQ is used. There is evidence to suggest that even with rather large distortions of perceived distances between scale points, Likert-type items perform closely to scales that are perceived as equal intervals (Taylor, 1983). So these items and other equal-appearing scales in questionnaires are robust to violations of the equal distance assumption many researchers believe are required for parametric statistical procedures and tests. With this consideration, further research on this study should use questionnaire with the same Likert scale points.

Recommendations for further research include a repeat for the study with a larger target population and sample, with specific experience especially in project management and working in virtual setting. The research should also include the examination for the emergence for virtual project teams in Malaysia with the inclusion of effectiveness of leadership style. The Project Management Institute (PMI) of Malaysia is the most widely recognized project management organizations with more than 908 certified members (PMI: Malaysia Chapter, 2017). Further study that focus within this professional community could replicate the methodology of the study towards larger sample size and more balanced proportion of gender and virtual setting, to see if similar results are attainable.

REFERENCE

- Aaker, D., Kumar, V., & Day, G. (2008). *Marketing Research, 9Th Ed.* Massachusetts: Wiley India Pte Ltd.
- Alfred, P., & Luminita, P. (2014). E-leadership for project managers: virtual leadership and trust-building for perceived project success. *Jonkoping International Business School*, 1-43.
- Anderson, Mcewan, A., Bal, J., & Carletta, J. (Computers in Human Behaviour 23). 2007. *Virtual team meetings: An analysis of communication and context*, 2558-2580.
- Antonakis, J., Cianciolo, D., & Sternberg, R. (2004). *The Nature of Leadership*. Thousand Oak: Sage Publication.
- Antonakis, J., Avolio, B., & Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine full-range leadership theory using the multifactor leadership questionnaire. *Leadership Quarterly*. Jun2003, Vol. 14 Issue 3,, 261-296.
- Anu, S. (2006). Strengthening Identification with the Team in Virtual Teams: The Leaders' Perspective. *Group Decision & Negotiation*. Jul2006, Vol. 15 Issue 4, 345-366.
- Aubert, B., & Kesley, B. (2003). FURTHER UNDERSTANDING OF TRUST AND PERFORMANCE IN VIRTUAL TEAMS. *Small Group Research*. Oct2003, Vol. 34 Issue 5, 575-619.
- Avolio, B. (2004). *Leadership Development in Balance: MADE/Born*. New Jersey: Lawrence Erlbaum Associates, Inc. Publishers.
- Avolio, B. J., & Kahai, S. S. (2003). Adding the "E" to E-Leadership:: How it May Impact Your Leadership. *Organizational Dynamics*, Vol. 31, Issue 4, 325-338.
- Avolio, B. J., & Yammarino, F. J. (2013). Transformational and Charismatic Leadership: The Road Ahead 10th Anniversary Edition. *Monographs in Leadership and Management Vol 5*.

- Avolio, B., & Bass, B. (2004). *Multifactor Leadership Questionnaire: Third edition*. California: Mind Garden.
- Avolio, B., Bass, B., & Jung, D. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology* (1999), 72, 441–462, 441–462.
- Baker, E. (2007, May 22). *Strategy-Business*. Retrieved from When Teams Fail: The Virtual Distance Challenge: <http://www.strategy-business.com/article/li00026?gko=68945>
- Baldoni, J. (2004). *Great motivation secrets of great leaders*. San Francisco: McGraw-Hill.
- Barbuto Jr., J. (2005). Motivation and Transactional, Charismatic, and Transformational Leadership: A Test of Antecedents. *Journal of Leadership & Organizational Studies*, Vol. 11 Issue 4, 26-40.
- Bass, B. (1985). *Leadership and performance beyond expectations*. New York: New York: Free Press.
- Bass, B. (1990). *Handbook of leadership: Theory, research, and managerial applications (3rd ed.)*. New York: NY: Free Press.
- Bass, B. (1998). *Transformational Leadership: Industrial, Military, and Educational Impact*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Bass, B. (2008). *Transformational Leadership: Industrial, Military, and Educational Impact*. New Jersey: Taylor & Francis e-Library.
- Bass, B., & Avolio, B. (1990). *Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire*. Palo Alto: Consulting Psychologists Press.
- Bass, B., Avolio, B., Jung, D., & Berson, Y. (2003). Predicting unit performance by Assessing Transformational and Transactional Leadership. *Journal of Applied Psychology* 2003, Vol. 88, No. 2., 207–218.

- Belout, A., & Gauvreau, C. (2004). Factors influencing project success: the impact of human resource management. *International Journal of Project Management*. Vol. 22 Issue 1, 1-11.
- Beranek, P., & Martz, B. (2005). Making virtual teams more effective: improving relational links. *Team Performance Management*. 2005, Vol. 11 Issue 5/6, 200-213.
- Bock, W. (2003). Some rules for Virtual Teams. *Journal for Quality & Participation*. Fall2003, Vol. 26 Issue 3, 43.
- Bono, J., & Judge, T. (2004). Personality and Transformational and Transactional Leadership: A Meta-Analysis. *Journal of Applied Psychology*. Oct2004, Vol. 89 Issue 5, 901-910.
- Burns, A., & Bush, R. (2013). *Marketing Research (7th Edition)*. New York: Prentice Hall.
- Burns, J. (1978). *Leadership (Harper Perennial Political Classics)*. New York : Harper & Row.
- Carte, T., Chidambaram, L., & Becker, A. (2006). Emergent Leadership in Self-Managed Virtual Teams: A Longitudinal Study of Concentrated and Shared Leadership Behaviors. *Group Decision and Negotiation* 15, 323-343.
- Cascio, W., & Shurygailo, S. (2003). E-leadership and Virtual Teams. *Organizational Dynamics* 31, 362-378.
- Cawthon, D. (1996). Leadership: The Great Man Theory revisited. *Business Horizons*. Vol. 39 Issue 3, 1-4.
- Cherry , K. (2017, March 28). *What Is Transformational Leadership? How Transformational Leadership Inspires* . Retrieved from Verywell.com: <https://www.verywell.com/what-is-transformational-leadership-2795313>
- Churchill, G., & Iacobucci, D. (2005). *Marketing Research: Methodological Foundations (9th Edition)*. Mason, Ohio: Thomson South-Western.
- Ciampa, D., & Watkins, M. (2005). *Right From The Start: Taking Charge In A New Leadership Role*. Boston: Harvard Business School Press.

- Clemmer, J. (1999). Managing things, leading people. *Executive Excellence*, Vol. 16, Issue 2, 9.
- Cook , B. (2004). Measuring the value of success in Project Management Organizatations. *UMI Number: 3219066, ProQuest*, 1-105.
- Cooper, D. (2003). *Business research methods 8th edition*. New York: McGraw-Hill/Irwin.
- Cooper, D., & Schindler, P. (2006). *Marketing Research*. New York: McGraw-Hill.
- Creswell, J. W. (2011). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research (4th Edition)*. Lincoln: Pearson.
- Cromb. (2005). Implementing virtual teams: A guide to organizational and human factors. *Leadership & Organizationmal Development Journal*, 26, 166.
- D. Leedy , P., & Ormrod, J. (2012). *Practical Research: Planning and Design (10th Edition)*. Harlow: Pearson New International Edition.
- Daft, R., & Lane, P. (2005). *The Leadership Experience, 3rd*. Cincinnati, Ohio: South-Western.
- Den Hartog, D., Van Muijen, J., & Koopman, P. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal (if Occi[iattonal and Organizational Psychology (1997)*, 70, , 19-34.
- Dragusha, C. (2012). Managing Virtual Team Guideline to Effective Leadership. *Saimaa University of Applied Sciences*, 12.
- Dube, L., & Pare, G. (2004). *The Multi-Faceted Nature of Virtual Teams: In D. J. Pauleen (Ed.), Virtual teams: Projects, protocols, and process (pp. 1-39)*. Hershey: Idea Group.
- Dube, N. (2015). Evaluating the Impact of the Project Implementation Profile (PIP) tool on Interface Management in Public Sector Projects: Case Study KZN Department of Health Facilities. *University of Cape Town*, 59.
- Ebrahim, N., Ahmed, S., & Taha, Z. (2009). Virtual Teams: A Literature Review. *Australian Journal of Basic and Applied Sciences* , 1.

- Edward, A., & Wilson, J. (2004). *Implementing Virtual Teams: A Guide to Organizational and Human Factors*. Oxon: Great Britain.
- Emery, C., & Barker, K. (2007). The effect of transactional and transformational leadership styles on organization commitment and job satisfaction of customer contact personnel. *Journal of Organization Culture, Communications, and Conflict*, 11, 77-90.
- Fiedler, F., & Garcia, J. (1987). *New approaches to effective leadership: Cognitive resources and organizational performance*. New York: Wiley.
- Furst, S., Reeves, M., Rosen, B., & Blackburn, R. (2004). Managing the life cycle of virtual teams. *Academy of Management Executive*. May 2004, Vol. 18 Issue 2, 6-20.
- Galup, S., Klien, G., & Jiang, J. (2008). The Impacts of Job Characteristics on is Employee Satisfaction: A Comparison between Permanent and Temporary Employees. *Journal of Computer Information Systems; Volume 48; Issue 4*, 55-65.
- Garman, A., Davis-Lenane, D., & Corrigan, P. (2003). Factor structure of the transformational leadership model in human service teams. *Journal of Organizational Behavior*; 24, , 203-812.
- Garson, D. G. (2017, March 28). *Factor Analysis: Statnotes*. Retrieved from North Carolina State University Public Administration Program:
<http://www2.chass.ncsu.edu/garson/pa765/factor.htm>.
- Gary, K. D. (2002). E-leadership. *Organizational Dynamics*, 121-133.
- Geib, K., & Swenson, J. (2013, February). China: Transformational Leadership for Policy and Product Innovation. *Advances in Management*, 6(5), 3-10. Retrieved from Ad:
<http://www.iveybusinessjournal.com/>
- George, A. E. (2008). Examining the relationship between leadership style and project success in virtual projects. *University of Phoenix, ProQuest, UMI Dissertations Publishing*, 2008. 3345049, 1-137.

- Gibson, C., & Cohen, S. (2003). *Virtual Teams That Work: Creating Conditions for Virtual Team Effectiveness*. San Francisco: Jossey-Bass, A Wiley Imprint.
- Gillespie, N., & Mann, L. (2004). Transformational leadership and shared values: The building blocks of trust. *Journal of Managerial Psychology*. 2004, Vol. 19 Issue 6, 588-607.
- Goodbody, J. (2006). Critical success factors for global virtual teams. *Strategic Communication Management*, 1-18.
- Grove, K. S., & LaRocca, M. A. (2011). An empirical study of leader ethical values, transformational and transactional leadership, and follower attitudes towards corporate social responsibility. *Journal of Business Ethics*, 103(4), 511-528.
- Hair, J., Bush, R., & Ortinau, D. (2002). *Marketing Research: Within a Changing Information Environment*. New York: McGraw-Hill Higher Education.
- Hambley, L., O'Neill, T., & Kline, T. (2006). Virtual Team Leadership: The Effects of Leadership Style and Communication Medium on Team Interaction Styles and Outcomes. *Organizational Behavior and Human Decision Process*, 17.
- Handley, H. (2017, February 24). *Malaysia's FDI Outlook for 2017: Trends and Opportunities*. Retrieved from ASEAN Briefing: Business Intelligence from Dezan Shira & Associates: <http://www.aseanbriefing.com/news/2017/02/24/malaysia-fdi-2017.html>
- Heater, H. (1995). Employees' Perspectives on One Dimension of Labour Flexibility: Working at a Distance. *Work, Employment & Society*, Vol. 9, 3, 473-498.
- Heifetz, R., Grashow, A., & Linsky, M. (2009). Leadership in a (Permanent) Crisis. *Harvard Business Review*, July 2009 Issue, 62-69.
- Heinitz, K., Liepmann, D., & Felfe, J. (2005). Examining the Factor Structure of the MLQ: Recommendation for a Reduced Set of Factors. *European Journal of Psychological Assessment (Impact Factor: 2.53)*. 01/2005; 21(3):, 182-190.

- Henderson, L. S., & Stackman, R. W. (2010). An Exploratory Study of Gender in Project Management. *Project Management Journal*, 1.
- Hernez-Broome, G., & Hughes, R. (2007). Leadership development: Past, present, and future. *Human Resource Planning*, 27, 24-33.
- Hoegl, M., & Proserpio, L. (2004). Team member proximity and teamwork in innovative projects. *Research Policy*. Oct2004, Vol. 33 Issue 8, 1153-1165.
- Hogue, R. T. (2015). Transformational Leadership for Virtual Teams in an Information Technology Organization. *Walden Dissertations and Doctoral Studies*, 68.
- Hughes, S., Tippet, D., & Thomas, W. (2004). Measuring Project Success in the Construction Industry. *Engineering Management Journal*. Sep 2004, Vol. 16 Issue 3, 31-37.
- Jarman, R. (2005). When success isn't everything: Case studies of two virtual teams. *Group Decision & Negotiation*, Vol. 14, Issue 4, 333-354.
- Jarvenpaa, S. (2004). Toward Contextualized Theories of Trust: The Role of Trust in Global Virtual Teams. *Information Systems Research*. Sep2004, Vol. 15 Issue 3, 250-264.
- Judge, T., & Piccolo, R. (2004). Transformational and Transactional Leadership: A Meta-Analytic Test of Their Relative Validity. *Journal of Applied Psychology*. Oct2004, Vol. 89 Issue 5, 755-768.
- Judge, T., Colbert, A., & Ilies, R. (2004). Intelligence and Leadership: A Quantitative Review and Test of Theoretical Propositions. *Journal of Applied Psychology*; Vol. 89, No. 3, 542-552.
- Juenemann, E. (2005). Implementing Virtual Teams. A Guide to Organizational and Human Factors. *Long Range Planning*. Feb2005, Vol. 38 Issue 1, 97-98.
- Jugdev, K., & Muller, R. (2005). A retrospective look at our evolving understanding of project success. *Project Management Journal*, 36(4), 19-31.

- Keegan, A., & Den Hartog, D. (2004). Transformational leadership in a project-based environment: a comparative study of the leadership styles of project managers and line managers. *International Journal of Project Management*. Nov2004, Vol. 22 Issue 8, 609-617.
- Kelloway, K., Mullen, J., & Francis, L. (2006). Divergent Effects of Transformational and Passive Leadership on Employee Safety. *Journal of Occupational Health Psychology*. Jan2006, Vol. 11 Issue 1, 76-86.
- Kendra, K., & Taplin, L. (2004). PROJECT SUCCESS: A CULTURAL FRAMEWORK. *Project Management Journal*, April 2004, Vol. 35 Issue 1, 30-45.
- Kendrick, T. (2012). *Results Without Authority: Controlling a Project When the Team Doesn't Report to You, A Project Manager Guide (2nd Edition)*. New York: American Management Association.
- Khan, M., Khan, I., Akhtar, B., Abbasi, Z., Khan, F., Jan, F., & Ahmad, R. (2014). Styles of Leadership and Its Impact upon the Projects Success . *Public Policy and Administration Research*, Vol.4, No.11, 48-52.
- Khawaj, M., & Bell, B. S. (2002). E-Leadership: The Emerging New Leadership for the Virtual Organization. *Journal of Managerial Sciences*, Volume III, Number 1, 38.
- Kleijnen, D. (2014). Leadership Styles in Virtual Teams. *Master Organization Studies - Tiiburg University*, 38.
- Koech, P. M., & Namusonge, G. (2012). The Effect of Leadership Styles on Organizational Performance at State Corporations in Kenya. *International Journal Of Business and Commerce* 2(1), 1-12.
- Kuo, C.-C. (2004). Research on Impacts of Team Leadership on Team Effectiveness. *The Journal of American Academy of Business*, Cambridge, 266-275.
- Kupakuwana, P., & van der Berg, G. (2005). The Goalposts for Project Success Have Moved -- A Marketing View. *Cost Engineering*. May 2005, Vol. 47 Issue 5, 28-34.

- Lee, J., & Jensen, J. (2014). The Effects of Active Constructive and Passive Corrective Leadership on Workplace Incivility and the Mediating Role of Fairness Perceptions. *Group & Organization Management*, 2014, Vol. 39(4), 416–443.
- Leedy, P., & Ormrod, J. (2004). *Practical Research: Planning and Design (8th Edition)*. New Jersey: Pearson Merrill Prentice Hall.
- Lee-Kelley, L., & Sankey, T. (2008). Global virtual teams for value creation and project success: A case study. *International Journal of Project Management*. Jan2008, Vol. 26 Issue 1, 51-62.
- Lee-Kelley, L., Grossman, A., & Gannings, A. (2004). A social interaction approach to managing the "invisibles" of virtual teams. *Industrial Management & Data Systems*. 2004, Vol. 104 Issue 8, 650-657.
- Lee-Kelly, L., & Loong, K. (2003). Turner's five-functions of project-based management and situational leadership in IT services projects. *International Journal of Project Management*, 583-593.
- Lewin, K., Lippitt, R., & White, R. (1939). Patterns of Aggressive Behavior in Experimentally Created "Social Climates". *The Journal of Social Psychology Volume 10, Issue 2, 1939*, 269-299.
- Lipnack, J., & Stamps, J. (1997). *Virtual Teams: Reaching Across Space, Time, and Organizations with Technology*. New York: John Wiley & Sons, Inc.
- Liu, J., Liu, X., & Zeng, X. (2011). Does transactional leadership count for team innovativeness. *Journal of Organizational Change Management*, 23(3), 282-298.
- Locke, E. (1999). *The Essence of Leadership: The Four Keys to Leading Successfully*. New York: Lexington Books.
- Lojeski, K. S., Reilly, R., & Dominick, P. (2006). The Role of Virtual Distance in Innovation and Success. *Proceedings of the 39th Hawaii International Conference on System Sciences - 2006*.

- Loureiro, G., Curran, R., & Zenun, M. (2004). *The Effects of Teams Co-location on Project Performance*. London: Springer.
- Malhotra, N., Hall, J., Shaw, M., & Oppenheim, P. (2002). *Marketing Research: An Applied Orientation*. New South Wales: Pearson Education Australia Pty Ltd.
- Margaret, L. R. (2010). E-leadership for Project Managers: A Study of Situational Leadership and Virtual Project Success. *Project Management institute, Survey Result*, 1-5.
- Marilyn, S., & J Bruce, F. (2001). *The Dissertation and Research Cookbook: From Soup to Nuts, A Practical Guide to Help you Start and Complete your Dissertation or Research Project*. Dubuque: Kendall/Hunt.
- Martin, R., Thomas, G., Charles, K., Epitropaki, O., & McNamara, R. (2005). The role of leader-member exchanges in mediating the relationship between locus of control and work reactions. *Journal of Occupational and Organizational Psychology*, 141-147.
- Mumford, M., Zaccaro, S., Harding, F., Jacobs, T., & Fleishman, E. (2000). LEADERSHIP SKILLS FOR A CHANGING WORLD: SOLVING COMPLEX SOCIAL PROBLEMS. *Leadership Quarterly. Spring2000, Vol. 11 Issue 1*, 11-25.
- Nancy, K. B., & Terri, E. D. (1999). Telecommuting: Justice and Control in the Virtual organization. *Organization Science, Vol. 10, No. 4*, 500-513.
- Neuman, W. (2009). *Social Research Methods: Qualitative and Quantitative Approaches (7th Edition)*. Boston: Pearson Education.
- Northouse, P. (2004). *Leadership: Theory and practice (3rd ed.)*. Thousand Oaks, California: Sage Publications.
- Piccoli, G., & Ives, B. (2003). Trust and the unintended effects of behavior control in virtual teams. *MIS Quarterly. Sep2003, Vol. 27 Issue 3*, 365-395.
- Piccoli, G., Powell, A., & Ives, B. (2004). Virtual teams: team control structure, work processes, and team effectiveness. *Information Technology & People 12/2004*, 375-379.

- Pinto, J. (1990). Project Implementation Profile: a tool to aid project tracking and control. *International Journal of Project Management*, 182.
- Pinto, J., & Slevin, D. (1988). Project success: Definitions and measurement. *Project Management Journal*, 19,, 67-72.
- PMI: Malaysia Chapter. (2017, March 28). *Homepage*. Retrieved from PMI: Malaysia Chapter: www.pmi.org.my
- Probal, D. (2011). Literature Review: E-leadership. *Emerging Leadership Journeys, Vol. 4, Issue 1*, 1-36.
- Puccio, G., Mance, M., & Murdock, M. (2010). *Creative Leadership: Skills That Drive Change*. Thousand Oak: Sage Publication.
- Puccio, G., Mance, M., & Zacko-Smith. (2010). Creative Leadership: Its Meaning and Value for Science, Technology, and Innovation. *International Center for Studies in Creativity*, 1-36.
- Rad, P. (2003). Project Success Attributes. *Cost Engineering. Apr2003, Vol. 45 Issue 4, p23*, 23-27.
- Rico, R., & Cohen, S. (2005). Effects of task interdependence and type of communication on performance in virtual teams. *Journal of Managerial Psychology. 2005, Vol. 20 Issue 3/4*, 261-274.
- Rubin, R., Bartels, L., & Bommer, W. (2002). Are leaders smarter or do they just seem that way? Exploring perceived intellectual competence and leadership emergence. *Social Behavior and Personality*, 30(2), 105-118.
- Rubin, R., Munz, D., & Bommer, W. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal. Oct2005, Vol. 48 Issue 5*, 845-858.

- Saunders, C., Van Slyke, C., & Vogel, D. (2004). My time or yours? Managing time visions in global virtual teams. *Academy of Management Executive*. Feb2004, Vol. 18 Issue 1, 19-31.
- Schmidt, F., & Hunter, J. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin*; 1998; Vol. 124, No. 2, 262-274.
- Seilheimer, S., Ishman, M., & Seilheimer, P. (2005). Technology Support for the Enhancement of Productivity in International Virtual Teams. *Journal of Information Science & Technology*. 2005, Vol. 2 Issue 3, 4-17.
- Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach, 4th Edition*. Honoken, New Jersey: John Wiley & Sons.
- Shatz, D. (2006). Defining Project Success. *Mortgage Banking*. Dec 2006, Vol. 67 Issue 2, 97-98.
- Sheikh Ali, A., & Ibrahim, I. (2014). The Impact of Leadership Style on Corporate Innovation: Survey from Telecommunication Industry in Somalia. *International Journal of Academic Research in Management (IJARM)* Vol. 3, No. 3, 233-241.
- Simola, S., Barling, S., & Turner, N. (2012). Transformational Leadership and Leaders' Mode of Care Reasoning. *Journal of Business Ethics*, 229-237.
- Skogstad, A., Einarsen, S., Torsheim, T., Schanke Aasland, M., & Hetland, H. (2007). The Destructiveness of Laissez-Faire Leadership Behavior. *Journal of Occupational Health Psychology*. Jan2007, Vol. 12 Issue 1, 80-92.
- Solomon, C. (2013). *Trends in Global Virtual Teams - Virtual Team Survey Report 2016*. New York: RW Culture Wizard.
- Steve, K. W., & Bradford, B. S. (2002). A topology of virtual teams: Implications for effective leadership. *Group & Organization Management*, Vol. 27, No. 1, 14-49.

- Susan, A. (2001). *E-Leadership*. New York: New York: Free Press.
- Taylor, M. (1983). Ordinal and interval scaling. *Journal of the Market Research Society*, 25 (4), 297-303.
- Tiri, G., Ogollah, K., & Mburu, D. K. (2015). Influence of Transformational Leadership Role on Performance of Virtual Project Teams in Safaricom Limited. *International Journal of Economics, Commerce and Management; Vol III, Issue 2*, 22.
- Turner, J. R., & Muller, R. (2005). The project manager's leadership style as a success. A literature review. *Project Management Journal*. Vol. 36 Issue 2, 49-61.
- Van Soest, R. (2013). Team Leadership in Virtual Team. *Tilburg University*, 21.
- Vance, C. (2004). The evolution of virtual teams. *Management* 651, Section 1, 15.
- Walumbwa, F., Lawler, J., Avolio, B., Wang, P., & Shi, K. (2005). Transformational leadership and work-related attitudes: The moderating effects of collective and self-efficacy across cultures. *Journal of Leadership & Organizational Studies*. Spring2005, Vol. 11 Issue 3, 2-16.
- Wang, G., Oh, I.-S., Courtright, S., & Colbert, A. (2011). Transformational Leadership and Performance Across Criteria and Levels: A Meta-Analytic Review of 25 Years of Research. *Group & Organization Management*, April 2011; vol. 36, 2: , 223-270.
- Williams, S., & Leavitt, H. (1947). Group opinion as a predictor of military leadership. *J Consult Psychol*. 1947 Nov-Dec; 11(6), 83-91.
- Yang, L.-R., Huang, C.-F., & Wu, K. (2011). The association among project manager's leadership style, teamwork and project success. *International Journal of Project Management*, Vol. 29m Issue 3, 258-267.
- Youngjin, Y., & Maryam, A. (2004). Emergent leadership in virtual teams: what do emergent leaders do? *Information and Organization*, Vol. 14, Issue 1, 27-58.

- Yukl, (2006). *Leadership in organizations (6th ed.)*. Upper Saddle River, New Jersey: Prentice-Hall.
- Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *The Leadership Quarterly; Volume 10; Issue 2*, 300.
- Zaccaro, S. J., & Bader, P. (2003). E-leadership and the challenge of leading E-teams. *Organizational Dynamics, Vol. 31, No. 4*, 377-387.
- Zacko-Smith, J. (2010). The Three-T's Framework for Leadership Education. *Academic Exchange Quarterly* , 1-5.
- Zakaria, N., Amelinck, A., & Wilemon, D. (2004). Working Together Apart? Building a Knowledge-Sharing Culture for Global Virtual Teams. *Creativity & Innovation Management. Mar2004, Vol. 13 Issue 1*, 15-29.
- Zhu, K., & Kraemer, K. (2005). Post-Adoption Variations in Usage and Value of E-Business by Organizations: Cross-Country Evidence from the Retail Industry. *Information System Research; Vol 1; Issue 1*, 61-84.
- Zigami, D., Blanchard, K., O'Connor, M., & Edeburn, C. (2004). *The leader within: Learning Enough About Yourself to Lead Others*. New York: Prentice-Hall.
- Zigurs, I. (2003). Leadership in Virtual Teams: Oxymoron or Opportunity. *Organizational Dynamics, Vol. 31 Issue 4*, 339-351.
- Zikmund, W. (2003). *Business Research Methods, (7th edn)*. Ohio: Thompson South Western.
- Zohar, D. (2002). The effects of leadership dimensions, safety climate, and assigned priorities on minor injuries in work groups . *Journal of Organizational Behavior (Impact Factor: 3.85). 01/2002; 23(1)*, 75 - 92 .

APPENDIX A – Questionnaire Part A - Demographics

Please check the response to each statement that best describe your situation

Personal information:

Gender:

- ☐ Male,
- ☐ Female,

How many year of project management experience do you have?

- ☐ < 1 year,
- ☐ 1 – 5 years,
- ☐ 6 – 10 years,
- ☐ 11 – 15 years,
- ☐ 16 – 20 years,
- ☐ > 20 years,

How many years of virtual project experience do you have?

A virtual project means any project consisting of team members distributed geographically. Virtual project team members could also be from different organizations, different culture, or working in different time zones. However, the key is because of geographic dispersion, a virtual team has to rely on communications technologies like e-mail or chat rooms to achieve project goals.

- ☐ < 1 year,
- ☐ 1 – 5 years,
- ☐ 6 – 10 years,
- ☐ 11 – 15 years,
- ☐ 16 – 20 years,
- ☐ > 20 years,

Education level – Highest degree obtained:

- ☐ Associates,
- ☐ Bachelors,
- ☐ Master,
- ☐ Doctorate,

Project Information:

Is your project a virtual project, as described above?

- ☐ Yes,
- ☐ No,

What is the scope of your firm?

- ☐ Regional,
- ☐ National,
- ☐ Global,

What is the size of your project team?

- ☐ < 6,
- ☐ 6 - 15,
- ☐ > 15,

What is the planned schedule for the project?

- ☐ < 6 months,
- ☐ 7 – 12 months,
- ☐ > 12 months,

What is the approximate budget for the project?

- ☐ < RM100,000,
- ☐ RM100,000 – RM250,000,

- ☐ RM251,000 – RM500,000,
- ☐ > RM500,000,

What is the greatest time difference between you and the other project members?

- ☐ There is no time zone difference,
- ☐ Time zone difference is less than 3 hours,,
- ☐ Time zone difference is between 4 and 9 hours,
- ☐ Time zone difference is greater than 10 hours,

Which statement best describes the number of organizations or firms represented by project team members?

- ☐ Team members represent a single organization,
- ☐ Team members represent two or more different organizations,

	1 – Never	2 – seldom	3 – Moderately	4 - frequently	5 – almost always
How often do you personally use video conferencing to work with team members on the project?					
How often do you personally use email to work with team members on the project?					
How often do you personally use voice mail to work with team on the project?					
How often do you personally use the telephone to work with the team members on the project?					

How often do you personally use Web-based intranet tools to with team members on the project?					
How often do you personally use an electronic meeting system to work with team members on the project?					
How often do you personally use an electronic meeting system to work with team members on the project?					
How often do you personally use instant messaging to work with team members on the project?					

APPENDIX B – Questionnaire Part B - PIP

Project Implementation Profile Project Success

Think of the virtual project you just described in Part A. Consider the statement below and rate each statement according to the degree to which you agree with the statement as it concerns your project. A rating of 4 indicates that the statement is neutral and you neither agree nor disagree. A rating above 4 indicates agreement with that statement as it concerns your implementation. A rating below 4 indicates disagreement with the statement.

	Strongly Disagree			Neutral			Strongly Agree
1. This project has/will come in on schedule.....	1	2	3	4	5	6	7
2. This project has/will come in on budget.....	1	2	3	4	5	6	7
3. The project that has been developed works, (or if still being developed, looks as if it will work).....	1	2	3	4	5	6	7
4. Given the problem for which it was developed, this project seems to do the best job of solving that problem, i.e., it was the best choice among the alternative.....	1	2	3	4	5	6	7
5. The results of this project represent a definite improvement in performance over the way clients used to perform these activities.....	1	2	3	4	5	6	7
PROJECT SCORE (Total items 1-5 above)	1	2	3	4	5	6	7
6. The project will be/is used by its intended clients.....	1	2	3	4	5	6	7
7. Important clients, directly affected by this project, will make use of it.....	1	2	3	4	5	6	7
8. We are confident that non-technical start-up problems will be minimal, because the project will be readily accepted by its intended users.....	1	2	3	4	5	6	7
9. I am/was satisfied with the process by which this project is being/was completed.....	1	2	3	4	5	6	7
10. This project has/will directly benefit the intended users: either through increasing efficiency or employee effectiveness.....	1	2	3	4	5	6	7
11. Use of this project has/will directly lead to improved or more efficient decision making or performance for the clients.....	1	2	3	4	5	6	7
12. This project will have a positive impact on those who make use of it.....	1	2	3	4	5	6	7
CLIENT SCORE (Total items 6-12 above)							
OVERALL SCORE (Total of all items 1-12)							
Copyright ©1987, Jeffrey K. Pinto and Dennis P. Slevin							

APPENDIX C – Questionnaire Part C - MLQ

For use by Chin Wai Chun only. Received from Mind Garden, Inc. on March 31, 2016

**Permission for Chin Wai Chun to reproduce 100 copies
within one year of March 31, 2016**

**Team Multifactor Leadership
Questionnaire**

Team Form and Scoring Key

by Bruce Avolio and Bernard Bass

Published by Mind Garden, Inc.

info@mindgarden.com
www.mindgarden.com

Copyright © 1996 Bruce Avolio and Bernard Bass. All Rights Reserved. It is your legal responsibility to compensate the copyright holder of this work for any reproduction in any medium. The copyright holder has agreed to grant one person permission to reproduce the specified number of copies of this work for one year from the date of purchase for non-commercial and personal use only. Non-commercial use means that you will not receive payment for distributing this document and personal use means that you will only reproduce this work for your own research or for clients. This permission is granted to one person only. Each person who administers the test must purchase permission separately. Any organization purchasing permissions must purchase separate permissions for each individual who will be using or administering the test. Mind Garden is a trademark of Mind Garden, Inc.

Question		0 = Not at all	1 = Once in a while	2 = sometime	3 = Fairly often	4 = Frequently often
1	I always provide other with assistances					
2	I always re-examine critical assumptions					
3	I always fail to interfere					
4	I always focus attention on mistakes					
5	I always avoid getting involved					
6	I always talked about my values					
7	I always absent when needed					
8	I always seek differing perspectives					
9	I talk optimistically about the future					
10	I instill pride into others					
11	Always discuss who is responsible					
12	I always wait for things to go wrong					
13	Always enthusiastic about what needs to be accomplished					
14	Importance of strong sense of purpose					
15	Always spend time teaching and coaching					

16	Always set expectation when goals is achieved					
17	Always believe in “If it ain’t broke, don’t fix it”					
18	Always go beyond self-interest for good of group					
19	Always treat other as individuals					
20	A problem must be chronic before action is taken					
21	Always build upon other’s respect					
22	Always concentrate full attention on mistakes					
23	Always consider moral and ethical consequences					
24	Always keep track of all mistakes					
25	Display sense of power and confidence					
26	Always articulate compelling vision of the future					
27	Always direct attention towards failures					
28	Avoid decision making					
29	Always recognize individuals have different needs from others					
30	Look at problems from different angles					
31	Always help other to develop strengths					
32	Suggest new ways to complete assignments					
33	Tendency to delay in responding to urgent questions					

34	Emphasize a collective sense of mission					
35	Express satisfaction when expectations met					
36	Express confidence goals will be achieved					
37	Always meets others job-related needs					
38	Use leadership that is satisfactory					
39	Get other to do more than expected					
40	Effective in representing others to higher authority					
41	Work with others in satisfactory way					
42	Heighten others desire to succeed					
43	Effective in meeting organizational requirements					
44	Increase others willingness to try harder					
45	Lead an effective group					

MLQ (IA) – Idealized influence (Attributed) =

(Question 10 + Question 18 + Question 21 + Question 25)/4

MLQ (IB) – Idealized influence (Behaviour) =

(Question 6 + Question 14 + Question 23 + Question 24)/4

MLQ (IM) – Inspirational motivation =

(Question 9 + Question 13 + Question 26 + Question 36)/4

MLQ (IS) Intellectual stimulation =

Question 2 + Question 8 + Question 30 + Question 32)/4

MLQ (IC) Individualized consideration =

(Question 15 + Question 19 + Question 29 + Question 31)/4

MLQ (CR) Contingent reward =

(Question 1 + Question 11 + Question 16 + Question 35)/4

MLQ (MBEA) Management by exception (Active) =

(Question 4 + Question 22 + Question 24 + Question 27)/4

MLQ (MBEA) Management by exception (Passive) =

(Question 3 + Question 12 + Question 17 + Question 20)/4

MLQ (LF) Laissez-faire leadership =

(Question 5 + Question 7 + Question 28 + Question 33)/4

MLQ Extra Effort =

(Question 39 + Question 42 + Question 44)/3

MLQ effectiveness =

(Question 37 + Question 40 + Question 43 + Question 45)/4

MLQ satisfaction =

(Question 38 + Question 41)/2

APPENDIX D – Questionnaire Survey Letter

**UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF ACCOUNTANCY AND MANAGEMENT (FAM)
BACHELOR OF MARKETING (HONS)**

Dear respondent,

Survey on the leadership style of transformational, transactional, and laissez-faire in relation with success of virtual project teams, in the context of Malaysia multinational company.

I am Year Three Trimester Two students from Universiti Tunku Abdul Rahman (UTAR), past graduates of Master of Business Administration. I am conducting a research project on the topic of ‘leadership style of transformational, transactional, and laissez faire in relation with success of virtual project teams, in the context of Malaysia Multinational Company’ and we appreciate your co-operation in order to complete the survey. The objectives of this research is to examine the relationship between the mentioned leadership styles with virtual team project success. The questionnaire is anonymous and confidential. This survey contains only three sections, which should take no more than 35 minutes to complete.

The results of this research will be kept by UTAR as for students’ reference. We will be more than willing to answer any questions or clarify any issues that need further explanation.

Thank you for your precious time and participation in this survey.

Yours Faithfully,

Chin Wai Chun