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**LINKING BIG 5 PERSONALITY TRAITS, CONFLICT
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ANALYSIS.**

BY

RIFFAT ABBAS RIZVI



**SHAHEED ZULFIKAR ALI BHUTTO INSTITUTE OF
SCIENCE**

AND TECHNOLOGY, ISLAMABAD

JANUARY, 2013

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RIFFAT ABBAS RIZVI

*A thesis submitted in partial fulfilment of the requirements for the
degree of masters in sciences in project management*

TO

DEPARTMENT OF MANAGEMENT SCIENCES



**SHAHEED ZULFIKAR ALI BHUTTO INSTITUTE OF SCIENCE
AND TECHNOLOGY, ISLAMABAD, January, 2013**

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DISSERTATION AND DEFENSE APPROVAL FORM

The undersigned certify that they have read the following dissertation, examined the defense, are satisfied with the overall exam performance, and recommend the thesis to the Department of Management Sciences, SZABIST for acceptance:

Dissertation Title: Linking BIG 5 Personality Traits, Conflict Management Styles with Leadership Effectiveness: A Structural Equations Analysis.

Submitted By: Riffat Abbas Rizvi

Registration #: 1067152

Master in Sciences (Project Management)

Dr. Uzma Javed

Name of Research Supervisor

Signature of Research Supervisor

Mr. Amer Riaz Qureshi

Name of Coordinator (MS/PhD)

Signature of Coordinator (MS / PhD)

Mr. Syed Asad Hussain

Name of Director

Signature of Director

21st January, 2013

CANDIDATE DECLARATION FORM

I, Riffat Abbas Rizvi, Son of Syed Mohammad Pervaiz Rizvi, Registration No, 1067152, a candidate of Master in Sciences in Project Management(Management Sciences) at the Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Islamabad do hereby declare that the dissertation Linking BIG 5 Personality Traits, Conflict Management Styles with Leadership Effectiveness: An Embryonic Structural Modelling Approach submitted by me in partial fulfilment of MS(PM) degree in my original work, and this work contains no material which has been previously accepted for the award of any degree or qualification in any institution and, to the best of my knowledge and belief, contains no material published by another party, except where due reference is made in the test.

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21st January, 2013

Date

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Name: Riffat Abbas Rizvi

Table of Contents

List of Figures.....	8
List of Tables.....	9
ABSTRACT	12
CHAPTER 1: INTRODUCTION/ BACKGROUND	13
1.1 Introduction.....	14
1.2 Research Questions.....	16
1.3 Research Contributions.....	17
1.4 Significance / Rationale of Study	17
1.5 Limitations	18
1.6 Scope of the Study	19
1.7 Structure of the Thesis	19
CHAPTER 2: LITERATURE REVIEW	21
2.1 Introduction.....	22
2.2 Leadership Effectiveness	22
2.2.1 <i>Adopting new Procedures</i>	23
2.2.2 <i>Achieving Employees Loyalty</i>	23
2.3 Leadership Trait Theory	24
2.3.1 Five Factor Personality Model.....	25
2.3.1.2 <i>Agreeableness</i>	26
2.3.1.3 <i>Extroversion</i>	26
2.3.1.4 <i>Openness to Experience</i>	27
2.3.1.5 <i>Conscientiousness</i>	27
2.3.2 Personality and Leadership Effectiveness	27
2.4 Behaviour Theory	29
2.4.1 Conflict Management Styles	30
2.4.1.1 <i>Integrating</i>	31
2.4.1.2 <i>Dominating</i>	31

2.4.1.3 <i>Compromising</i>	32
2.4.1.4 <i>Avoiding</i>	32
2.4.1.5 <i>Obliging</i>	32
2.4.2 Conflict Management Styles and Leadership Effectiveness	33
2.4.3 Personality and Conflict Management Styles.....	34
2.4.4 Personality, Conflict Management Styles and Leadership Effectiveness.....	35
2.6 Chapter Summary	38
CHAPTER 3: METHODOLOGY	39
3.1 Introduction.....	40
3.2 Data Collection Procedure	40
3.3 Variables and Measures	41
3.3.1 Personality	41
3.3.2 Conflict Management Styles	42
3.3.3 Leadership Effectiveness.....	42
3.3.4 Demographics.....	43
3.4 Data Analysis Techniques.....	43
3.4.1 Data Screening / Descriptive Statistics.....	45
CHAPTER 4: RESULTS AND DISCUSSION	47
4.1 Introduction.....	48
4.2 Respondents profile	48
4.3 Descriptive Statistics and Reliability of Measures	51
4.4 Bivariate correlations.....	52
4.5 Structural Equation Modelling Analysis.....	55
4.5.1 Confirmatory Factor Analysis / Measurement Model.....	55
4.5.2 The Measurement Model.....	56
4.5.3 Path Analysis	57
4.6 Discussion of Results	59
CHAPTER 5 CONCLUSION AND IMPLICATIONS OF THE RESULT.....	63
5.1 Introduction.....	64
5.2 Conclusion	64
5.3 Implications of the study.....	65
5.3.1 Theoretical Implications of the Study.....	65

5.3.2 Practical Implications of the Study	65
5.4 Limitations of the Study.....	66
5.5 Future Research	68
References	69
Research Questionnaire	82

List of Figures

1) Figure 4.3: The Structural equational Modeling.....	57
2) Figure 4.1: Path model with standardized coefficients	58

List of Tables

1) Table 2.1: Past Qualitative reviews of the Traits of Effective or Emerging leaders....	29
2) Table 3.1: Number of respondents industry wise.....	41
3) Table 4.1: Demographic profile of respondents.....	49
4) Table 4.2: Mean, Standard Deviation, Kurtosis & Skewness, Items Description.....	52
5) Table 4.3: Bi-variate correlations.....	54
6) Table 4.4: Fit indices.....	55
7) Table 4.5: The Measurement Model.....	55
8) Table 4.6: Path analysis.....	59

DEDICATION

I dedicate this research primarily to my mother who struggled throughout her life to bring me up to this stage.

ACKNOWLEDEMENTS

I am thankful to Allah Almighty for His blessings upon me. First and foremost, I am forever indebted to my research supervisor Dr. Uzma Javed, who has been very supportive throughout. This work would never have been completed without her valuable input. Her keen mind, abilities and expert guidance put me on the right track and enabled me to complete this thesis. I would like to thank her for her hard work and patience.

I also wish to thank my teachers especially Dr. Muhammad Zahid Iqbal, Dr. Husnain Naqvi, Dr. Faisal and Dr. Attique ur Rehman for their encouragement and guidance especially in learning research methodology in MS in project management studies. I am grateful to both the academic and administrative staff at SZABIST for their friendliness, support, and guidance especially Mr. Farid Zafar and Mr. Fahim-ur-Rehman along with other staff members.

I also express my gratitude to my fellow students in MSPM at the institute. Special thanks to my friends Jawaad Khan, Syed Mumtaz Ghaffar Shah, Amir Waheed Satti, Shah Mohammad, Jibran Sheikh, Wajid Shakeel, Imran Ghaffor Chaudary, and Amir Ghaffor Chaudary for their kind advice and continuous encouragement.

I would like to thank all personnel from KPK Province, Punjab Province and Islamabad Federal Territory who were kind and supportive through my study tenure. Thank you all, without your support this study would not have been possible.

ABSTRACT

The Present study aims to examine the direct and indirect (through conflict management styles) impact of personality on the effectiveness of project managers working in various organizations. The investigation offers a conceptual foundation for exploring the relationship between big five personality factors, conflict management styles and leadership effectiveness (i.e. achieving employee's loyalty and adopting new procedures). Data was obtained from 308 project managers from multiple organizations to test the hypothesized relationship. Results show that the conflicts management styles partially mediated the association amongst personality traits and leadership effectiveness. Furthermore, extroversion, agreeableness and emotional stability are important personality traits among project managers, whereas, integrating and compromising are important conflict management styles among project managers. Extroversion and agreeableness have an indirect effect on employee loyalty and adopting new procedures through integrating and compromising styles. Project managers who are extrovert and have the tendency of agreeableness in relation to integrating and compromising style can make their selves as effective project managers.

Key Words: Personality, Conflict Management Styles, Leadership effectiveness, Rahim organizational conflict Inventory-11

CHAPTER 1: INTRODUCTION/ BACKGROUND

1.1 Introduction

Researchers have shown significant interest in the human psychology related to leadership effectiveness e.g., (Carlyle, 1849; Stogdill, 1948; Bass, 1990; Hughes *et al.*, 1996; Yukl, 1998; Judge *et al.*, 2002). For decades researchers have been instrumental to examine why some leaders are effective whereas others are not? The earlier studies of leadership effectiveness have been dominated by trait theory. The proponents of trait theory believe that leaders are born with certain characteristics which make them more effective. Human abilities differ from person to person and this affects the individual's effectiveness when performing a leadership role as suggested by Atwater *et al.*, (1999); Hogan *et al.*, (1994). Judge *et al.*, (2002a) have supported this notion that human abilities differ from person to person. While over hundred years of research has been devoted to answer this same question, outcomes of earlier studies linking with various personality traits towards leadership effectiveness have been inconsistent and inadequate. Researchers remained cynical about the association amongst various personality traits possessed by the leaders and their effectiveness (Conger and Kanungo, 1998). These researchers have pointed out that: (1) there is no such thing as universal traits (House and Aditya, 1997) because a small number of personality traits cannot be isolated that may characterise leaders (Andersen, 2006); and, (2) trait theory offers too simple explanation of the association amongst personality traits and leadership effectiveness (Conger and Kanungo, 1998).

Earlier research has identified various personality traits such as self-confidence (e.g., Stogdill, 1948; House and Aditya, 1997; Northouse, 1997; Bass, 1990; Yukl, 1998; Daft, 1999;), adjustment (e.g. Mann, 1959; Bass, 1990; House and Aditya, 1997), Sociability (Stogdill, 1948; Northouse, 1997), integrity (Bass, 1990; Northouse, 1997; Daft, 1999;), masculinity (Mann, 1959), determination (e.g. Northouse, 1997), creativity (e.g. Daft, 1999; Bass, 1990), extroversion (e.g. Mann, 1959), emotional balance (e.g. Bass, 1990; Yukl, 1998; Hogan *et al.*, 1994;), originality (e.g. Bass, 1990; Daft, 1999), conscientiousness (e.g. Hogan *et al.*, 1994), aggressiveness (e.g. Bass, 1990), and alertness (e.g. Stogdill, 1948; Bass, 1990; Daft, 1999) are few to be mentioned here. Some traits have been consistently included in the personality-effectiveness studies e.g. self-confidence (Costa & McCrae 1992), adjustment (Digman, 1990), integrity (Moberg 2001) and emotional balance (Costa & McCrae, 1992) while others are not. The reason for the unpredictable and unsatisfactory outcomes, on the personality-effectiveness

relationship from earlier literature, may be the lack of consensus on personality traits (Antonioni, 1998; Ma & Jaeger, 2003). While it was recognized that a taxonomic structure had been needed to organize the traits which is five-factor model of personality traits filled the gap and has being consistently used in personality research (Goldberg, 1990). The five factor model identified extraversion, openness to experience, agreeableness, conscientiousness and neuroticism as personality types (Costa & McCrae, 1995). Existing research conducted by (Barbuto *et al*, 2010) has consistently established that big five factors are not only culturally generalizable (Costa & McCrae, 1988) but are also stable over time (Digman, 1990).

Given that personality accounts for a small variance in leadership effectiveness (Mann, 1959; Robertson *et al.*, 2000; Sternberg, 2007), behavioural scientists argue that traits alone are not sufficient for leadership effectiveness. This argument was further strengthened by (Farkas and Wetlaufer, 1996). (Farkas and Wetlaufer, 1996) argued that leaders suppress or develop certain personality traits in order to be effective. They suggested that leadership effectiveness is not driven by what leaders are from inside but by what the outside demands. Thus leadership effectiveness is not a function solely of personality (Farkas and Wetlaufer, 1996). Studies of leader behaviour have shown differences in behaviours such as conflict management styles (Antonioni, 1998; Wood and Bell, 2008), leadership styles (Judge and Bono, 2000) and decision making styles (Vinkenburg *et al.*, 2001). Leader's behaviour such as conflict management styles together with personality can better predict leadership effectiveness.

On the other hand, researchers who were interested in understanding and predicting conflict management styles have frequently examined personality traits to explain the differences in conflict handling preferences; however the results remain largely inconclusive (Antonioni, 1998; Moberg, 2001). Earlier research has used single personality trait rather than a comprehensive model of personality (Ma & Jaeger, 2003) and Thomas killman conflict management survey which is based on forced choice response scale. Thus, researchers called for studies based on comprehensive measures of personality and conflict management styles. With the emergence of Big 5 personality traits and conflict Rahim's Conflict Inventory recently, studies have linked personality to conflict management styles and produced more promising results (Moberg, 1998; Moberg, 2001, Barbuto *et al*, 2010). Behavioural theorists argue that while leaders possess specific personality traits, traits determine their behaviours (Kirkpatrick and Locke, 1991) and in turn these behaviours produce a consequence such as effective or ineffective leader (Barbuto *et al*, 2010). Thus, it is important for the present study to determine whether behaviours such as conflict management styles mediate the relationship between personality traits and leadership

effectiveness or not. (Barbuto *et al.*, 2010) & (Connelly *et al.*, 2000), shown that leader behaviour accounts for more variations in leadership effectiveness than personality traits and that leader behaviour mediates the association amongst behaviour and leadership effectiveness. Thus leader's behaviour mediates the association amongst various personality traits and leadership effectiveness. Where, (Barbuto *et al.*, 2010) have included conflict management styles as leaders behaviour in their study, (Connelly *et al.*, 2000) have included leadership styles as leader behaviour in the relationship between personality and leadership effectiveness. Both studies found that personality partially effects leadership effectiveness indirectly through leader behaviour. There is a need to replicate their research in eastern context to generalize the findings. Replications have been recognized as an important feature of empirical research by many researchers (Dilanthi et al, 2002).

This study is conducted to testify project manager's findings regarding the observed variables in Pakistani context. To further advance the research in this area, the current study intends to use Big 5 personality model to examine whether strong relationship exist between personality traits, conflict management styles and leadership effectiveness. Moreover, different conflict management styles as indicators of behavioural pattern will be investigated. Both personality and conflict management style will be used to investigate the impact on leadership effectiveness.

1.2 Research Questions

The present study, therefore aims at investigating the following research questions:-

1. Do personality traits directly affect conflict management styles & leadership effectiveness? If so, how much variance in leadership effectiveness and conflict management styles is explained by personality?
2. Do conflict management styles affect leadership effectiveness? If yes, how much variance in leadership effectiveness is explained by conflict management styles?
3. Do conflict management Styles mediate the relationship between personality and leadership effectiveness?

1.3 Research Objectives

The Research has following objectives:

- a) To examine the relationship between personality traits and leadership effectiveness
- b) To examine the relationship between personality traits and conflict management styles.
- c) To examine the relationship between conflict management styles and leadership effectiveness.
- d) To examine the indirect relationship between personality traits and leadership effectiveness mediated by conflict management styles.

1.3 Research Contributions

The present study makes the following contributions.

1. Very few studies have examined the relationship between Big 5 personality model, conflict management styles and leadership effectiveness with inconsistent and even conflicting findings (Antonioni, 1998; Pepin, 2005) etc. A better understanding may help managers handle conflict more effectively to become effective leaders.
2. Given the number of studies testing antecedent and consequence of conflict management styles but never in a single research design. This research is an answer to this call by including personality (antecedent and consequence (leadership effectiveness) of conflict management style in the study.

1.4 Significance / Rationale of Study

According to (Zaccaro, Kemp & Bader, 2004), Trait Leadership theory is demarcated as the collection of individual capabilities that represent a variety of individual dissimilarities and nurture leadership effectiveness in various stages of the organization. (Derue, Nahrgang, Wellman & Humphrey, 2011) propounds that this trait theory is developed from the research happened

earlier with the prime attention on discovering various genetic attributes that differentiate one leader from another.

Many researchers are of the point that leadership is unique to every individual because of the traits and the individuals possessing certain unchallengeable traits cannot be further polished (Galton, 1869). (Derue et al., 2011) suggested that researchers have found out that successful leaders differentiate their selves from other leaders and they contain certain individualistic attributes which help them to achieve effectiveness. As revealed by (Hogan et al., 1994 and Atwater et al., 1999) traits possessed by one human, reasoning aptitudes and separate individualistic variations have forecasted leadership effectiveness. In the past, researchers have shown great commitment to discover the associations between personality traits and leadership effectiveness nonetheless (Judge et al., 2002a) shed light on the mechanism by which these relations ascend (Peterson et al., 2003). (Connelly et al., 2000) also reported findings on the associations between personality and leadership effectiveness. Researchers have claimed on the importance of examining the Leadership qualities which exists external to boundaries of conventional leader's abilities" (Connelly et al., 2000, p.81).

A similar research has been done in the recent past and this current study has been evolved from the basic idea taken to test various conflict management styles and to find out that if the mediate the association between personality traits and leadership effectiveness. Many researchers have proposed to explore the association between conflict management styles and Leadership effectiveness in the form of various frame works plus research intentions. Thus, In this study big five model of personality (Digman, 1990); (Costa & McCrae, 1992); and Goldberg (1993,1999) & Rahim's Organizational Conflict inventory -II (ROCI) (Rahim, 1983) along with leadership effectiveness (Yau, 2003) Scales were used to examine the associations. This study is the replication of the prior work to testify their findings regarding the observed variables in Pakistani context. The culture of Pakistan is totally different from western world. Most of the studies have been carried out in the western context whereas the confirmation of the finding from eastern context is still unexplored.

1.5 Limitations

The time frame required for the completion of this study and the sample size to be study were a limitation. Respondents were limited to the Project Managers who agreed to participate.

1.6 Scope of the Study

The scope of the study relates to the working of Project managers and their effectiveness by applying appropriate leadership behaviour to development sector and commercial sector organizations of Pakistan. This research provides a frame work to study Project managers' various personality attributes their conflict management styles and how much they adopt new procedures and achieve employee's loyalty with in leadership effectiveness. Furthermore, the findings of the study highlight the major associations between the personality, conflict management styles and leadership effectiveness.

1.7 Structure of the Thesis

The first chapter of the thesis provides introduction of the research which identify the gap in order to examine the associations between various Personality Traits, Conflict Management Styles and Leadership effectiveness. Furthermore, statement of the problem is highlighted to address on the importance of the associations amongst various traits possessed by one's Personality, their Conflict Management Styles and their Leadership effectiveness. Moreover, study also highlights the queries followed by the importance and scope of the research.

The second chapter offers an explanation of the relationships of interest based on trait and behavioural theories. Based on these theories and empirical evidences, the testable hypothesis have been deduced. Theoretical Frame work is explained through two theories namely leadership trait theory and behavioural theory. Empirical evidences and theoretical support help to associate the variables through Structural Equational Modeling. At the end of the second chapter, Research model is introduced followed by the hypothesis. Chapter three discuss the methodology adopted for the present study. Data Collection Procedure is completed through self-administrated questionnaire which is applied to various development and commercial sector organizations on the basis of which industry wise respondent data are collected. Variables which include Personality Traits, Conflict management styles and leadership effectiveness are measured through likert scale and their mean, standard deviations along with Alpha (). Variables and measures are

followed by the Demographic profile of the Respondents. Data Analysis technique which includes Data Analysis techniques which involves Data Screening along with Descriptive Statistics, Reliability Analysis and Structural Equation Modeling / Path Analysis are discussed on the strong theoretical reasoning in order to establish linkages amongst Personality Traits, Conflicts Management Styles along with Leadership effectiveness.

Results emerged from the data analysis reveal answers to the research study queries in Chapter number four. In doing so, descriptive analysis comprising Mean, Standard Deviation, Alpha Cronbach values, Skewness and Kurtosis along with bivariate correlations are reported. Furthermore, the results of structural equation modeling analysis which includes confirmatory factor analysis, Path Analysis had been reported. Discussion of the Results is written at the end of this chapter which clearly explains the association between various personality traits, conflict management styles and leadership effectiveness through theoretical support in order to link the theory to answer the research questions.

The final chapter, chapter five which provides conclusion, inferences emerged from the study followed by the recommendations and future research areas are mentioned.

Annexures provide the details of the references utilized in this current study alphabetically along with the Research questionnaire.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Because the nature of research and given the vastness of the available literature, this section is divided into parts for the purpose of clarity and development of relationship between different components of the leadership effectiveness, multiple traits possessed by one's personality, and conflict managing styles of project managers. This research mainly aims to assess the association between leadership effectiveness, personality and conflict management styles. In doing so, A research model has been put forward based on trait theory and leader behaviour theory. The first section discusses leadership effectiveness and its measures. The second section presents literature on trait theory which emphasizes on the relationship between personality and leadership effectiveness. The third section presents literature based on the behavioural theory which emphasize on personality as antecedent of behaviour and leadership effectiveness as consequence of behaviour. Finally, based on the analysis of the literature a model is presented for present study.

2.2 Leadership Effectiveness

“Leaders are people who inspire with clear vision of how things can be done better” (Slater, 2001). Various definitions of the Leadership effectiveness have been written by the social scientists (Bass, 1990, pp. 11–18). According to (Batten, 1991) leadership is defined as the growth of a transparent and broad system of prospects to find out the strong points in the forms of strengths of all the possessions of the organization – the most valuable among which are employees. As proposed by (Drucker, 1985) Leadership is taking the employees vision to the top level, enhancing their productivity to the highest standards, making their personality attributes strong and outside its standard usual constraints. According to (Wallis, 2002, p. 59) lots of definitions of leadership effectiveness support the notion that leadership is a shared influence through which employees in the form of groups are taken towards the goal achievement. The author tends to discuss the importance of collective effort with respect to realize the goals and their attainment by the group (Wallis, 2002, pp. 60–61). Effective leadership can be summarised as the ability to lead a group of individuals in order to achieve their personal as well as collective

goals by inspiring it, the same vision is communicated towards the employees. Project Managers have clear a vision along with excellent communication skills, which they use for communicating their vision to their followers at the same time allowing other leaders to emerge. Effective project management requires human resource management by adopting new procedures and achieving employee's loyalty (PMBOK, 2004).

2.2.1 Adopting new Procedures

(Anderson, 2000) was of the view that leading procedures such as being helpful and representational both exist in the leadership field today. Researchers are of the view that leadership effectiveness is always in the framework of Leader's roles and responsibilities for subordinates and other organizational employees (Blake and Mouton, 1985). New procedures bring innovations in the organizations and give them competitive advantage. This also encourage learning and problem solving in the organizations. (Abujarad et al., 2010). (Abujarad et al., 2010) Examined the association between personality traits and adopting new procedures and found a positive and significant association amongst the traits which leaders possessed and their effectiveness.

2.2.2 Achieving Employees Loyalty

Achieving employees loyalty is a dimension of leadership effectiveness that addresses the extent to follow leaders by the employees with commitment (Blake and Mouton, 1985; Anderson, 2000, and Coughlan, 2005). If there is sense of empathy, willingness to work with fullest efforts, attachment and dedication towards leaders only then effectiveness comes through leader Chen, Tusi, and Farh (2002). This notion is also backed by Ribelin, 2003 that employees are only loyal towards an effective leader. Employee loyalty is achieved with the help of sound leadership and thus organizations get competitive advantage and motivates team members to make their leaders effective (Abujarad et al., 2010). Strong and positive association is suggested by (Abujarad et al., 2010) amongst personality traits and achieving employees loyalty.

Thus, the present study used the two dimensions of leadership effectiveness i.e. one is adopting new procedure and other is achieving employee loyalty. The next section discusses the trait theory which poses personality and an antecedent to leadership effectiveness.

2.3 Leadership Trait Theory

According to Trait theory Individuals acquire leadership traits as part of their personalities. These traits can be further polished to become effective leader (Zaccaro, Kemp, & Bader, 2004). These traits are polished by application in real life scenarios and they are further enhanced with experience, willingness to learn and adapting to given circumstances (Derue, Nahrgang, Wellman, & Humphrey, 2011). Motivation, training and acceptance as a leader also play an important part in grooming leader but at the same time research has shown that traits alone do not guarantee leadership success (Derue et al., 2011). Moreover important personality traits are helpful to forecast leadership effectiveness so organization tend to shape up the process of selecting the leader, drill, expansion practices (Derue et al., 2011). Thomas Carlyle's "great man" philosophy was the driving force behind the Leadership trait theory. This theory revealed the importance of Carlyle's work by the title of "history of the world and the biography of great men" (Carlyle, 1849).

History is formed with the help of the forces associated with extraordinary leadership (Judge, Piccolo & Kosalka, 2009). Inclined to the idea proposed by Carlyle, Galton further improved on the findings of Judge and Piccolo. They further explored Leadership is only related to the ones who are extraordinary intelligent and the attributes which these individuals possess could not be established further and this lead to valid reason of all research happened in 1900s is focused on the leadership (Judge, Bono, Ilies, & Gerhardt, 2002). (Cowley, 1931) mentioned that the practise of the research on leadership is always and usually based on the study of traits possessed by the individuals.

According to various scholars and researchers such as (Avolio, Sosik, Jung & Berson, 2003) Leadership is one of those topic which have been subject to endless debates in the world (Bass, 1990) and (Bennis, 2007) have given similar opinions regarding this widely discussed topic. (Galton & Eysenck, 1869) further added that the root cause of this research is mainly trying to identify characteristics that isolated leader from non-leader and explain the effectiveness of individual as leader. The early research mentioned above took shape in form of the trait paradigm. Later studies conducted on leadership showed that demographics, skills and abilities and personality attributes determine leadership effectiveness (Eagly, Karau, & Makhijani, 1995;

Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Colbert, & Ilies, 2004; Mumford, Campion, & Morgeson, 2007).

2.3.1 Five Factor Personality Model

The model as put forward by (Costa and McCrae, 1992) which includes five factors namely: “emotional stability, agreeableness, extraversion, conscientiousness and openness to experience”. In our world there is huge diversity amongst the human race in terms of culture, religion, gender and social status (Abujarad et al., 2010). (Lussier, 2000) defined Personality as ‘the totality of characteristics exhibiting one’s personality’ or ‘it is fairly firm set of behavioural qualities’ that help to describe and forecast one’s human behaviour or future course of actions. Human behaviour depends upon various factors which in term determine our social standing in the society. All though there are many factors which might get masked due to social setup in which one lives in ordinary course of life. But when we talk about work place these factors become most apparent. In terms of Human resource management this becomes crucial that we study the different patterns of human behaviour, but the human behaviour is prone to changes over time and situations. Due to these constant changes and shifts in human behavioural patterns, the study becomes very complex. At the same time almost of the human beings irrespective of religion, social status and culture experience basic feelings such as affectionate, antagonistic and tolerance. They react to these feelings in almost similar fashion (under given environment i.e. work place) so it becomes easier to study these traits under certain conditions and draw some sort of conclusive evidence in order to predict the association amongst the observed variable in the current study . In 1980’s and 1990’s there was considerable developments in the theories related to personality and traits. The major breakthrough was development of the Big five Personality traits model. Initial five factor model of personality was put forth by (Digman, 1990) which was later on extended by Goldberg (1993, 1999) to the highest level of organization. (Digman, 1990); (Costa & McCrae, 1992); and Goldberg (1993, 1999) have all tested this model and have validated it via their research. They have concluded that Big Five Personality Traits model which is a comprehensive, broad, realistic in its form lead to data-driven research outcome, which provide insight in understanding human behaviour within projects.

2.3.1.1 Emotional Stability

Emotional stability refers to a propensity to get the experience about unpleasant emotions easily, such as annoyance, nervousness, unhappiness, or susceptibility (Sensitive/Nervous vs. secure/confident). (McCrae and Costa, 1987) described Emotional Stability as personality possessing balanced emotions and behaviour. Such Personalities when interact socially, have presented less traits of controlling their emotional stability

2.3.1.2 Agreeableness

Agreeableness refers to a propensity to be empathetic and obliging rather than uncertain, emotionless and unfriendly towards others (friendly/compassionate vs. cold/unkind). Agreeableness trait is one of the dimensions which displays positive characteristics and often characterized by cooperating with one's self and others and not coming into rivalry and competition (McCrae and Costa, 1987). (Carnevale and Isen, 1986) described Agreeableness as an ability to reduce negative interest and plans while ensuring positive mutual assistance.

2.3.1.3 Extroversion

Extraversion can be defined in terms of liveliness, positive feelings, urgency and the propensity to find out inspiration in the company of others (Outgoing/energetic vs. solitary/reserved). (McCrae and Costa, 1987) reported that People having this trait are fond of working in teams and more into putting forward their opinions with authority and boldness. People possessing this trait are having high concern for others and always indulge in working together and they go for compromise (Olekalns and Smith, 1999). (Antonioni, 1998); (Moberg, 2001) reported that there is a positive relationship amongst extroversion along with both integrating and dominating styles. Same results are predicted by the Project Managers.

2.3.1.4 Openness to Experience

Openness to experience refers to gratitude for an art, sentiments, exploration, rare thoughts, inquisitiveness, and variety of experience (Inventive/curious vs. consistent/cautious). Openness to Experience is characterized by creative thoughts, originality and independence (McCrae and Costa, 1987). Personality having high openness to experience trait take in to account other people's ranks through which they generate positive outcomes (Judge et al., 2002 a).

2.3.1.5 Conscientiousness

Conscientiousness refers to a propensity to demonstrate self-discipline, perform obediently and purpose for accomplishment, prearranged rather than having spontaneous behaviour (Efficient/organized vs. easy-going/careless). (McCrae and Costa, 1987; 1997) proposed that Conscientiousness is characterized as balanced aspect of individual. High conscientiousness may take to sense of achievement, self-motivation and more objective orientation (Barrick and Mount, 1993). (Moberg, 2001) reported that individuals having this trait are more in to following team objectives and roles assigned to them by displaying great level of firmness along with willpower.

2.3.2 Personality and Leadership Effectiveness

According to the analysis carried out by Hernstein and Murphy's (1994) intelligence as a personality trait possessed by the leader is associated with leadership effectiveness. . Schmidt and Hunter (2000) backed the same notion that intelligence is a important personality trait of a leader, and thus make him/her effective. Lord, Foti, and De Vader (1984) discovered 59 traits associated with effective leader ship and intelligence is one of them. Several other scientists also gave same arguments that intelligence as an important personality traits yielded leadership effectiveness and intelligence is a trait present in charismatic leaders too (e.g., Mann, 1959; Stogdill,1948; Bass, 1990; Kirkpatrick & Locke, 1991; House & Aditya, 1997). Fielder (2002) suggested that intellectual abilities don't only guarantee leadership effectiveness. Lord, De Vader, and Alliger (1986) utilized meta-analysis approach to investigate the trait theory and its impact on leadership

effectiveness. This approach is utilized on the previous work carried out by Mann's (1959) that identified various traits which help in predicting relationship towards effectiveness.

Studies have reported that individual behaviours exhibit direct linkage with effective leadership (Taggar et al., 1999). BIG five personality traits are utilized to propose strong relationship to leadership effectiveness (Judge et al., 2002 b; Hogan and Hogan, 1996). Considerable relationships are developed between individual traits and the possibility of becoming leaders (Hogan *et al.*, 1994). Similar views regarding the individual traits and outcomes were established by (Mount *et al.*, 1999). Leaders are rated high among followers because leaders exhibit extrovert behaviour (Thomas et al., 2001). (Bass, 1990); (Robertson et al., 2000) reported findings that conscientiousness is also related to leadership effectiveness.

Research in the leadership used BIG five personality and proposed strong relationships to leadership effectiveness (Hogan and Hogan 1996; Judge et al., 2002 b). Hogan (1996) had recommended selecting personality predictors as the results have shown higher correlation of personality with leader's performance (Tett, Jackson & Rothstein, 1991). The matching actions in terms of their specificity are also recommended by (Pulakos, Borman & Hough, 1988).

We have to keep in mind that managers often overstated their talent and abilities and thus psychologists have to use observers' ratings as predictors in order to evaluate potential of leadership in a candidate. According to (Curphy & Osten, 1993; Nilsen, 1992) the resulting correlations should be within the range specified as 0.20 to 0.40 while observers' ratings should lead to correlations which should range between 0.30 and 0.60, although the criteria are very helpful but they should not be taken as definitive. Considerable relationships are developed between individual traits and effective leadership (Hogan et al., 1994). But as with all theories this theory also has its critiques who sort to break with traditional paradigm and sort new avenues of research (Jenkins, 1947; Stogdill, 1948 Mann, 1959). (Hemphill & Coons, 1957; Stogdill, 1963) state that this criticism lead scholars and researchers to look beyond the established theories and they started exploring the behavioural aspects of leadership. Recently researchers have directly supported trait leadership theory which is re-emerged in today's world (Judge et al., 2002; Judge, Colbert, & Ilies, 2004). The past qualitative research on the above mentioned subject is demonstrated in subsequent table.

Table 2.1: Past Qualitative reviews of the Traits of Effective or Emerging leaders

Daft (1999)	Stogdill (1948)	R. Hogan et al. (1994)	House & Aditya (1997)	Mann (1959)
Alertness	Dependability	Surgency	Achievement motivation	Adjustment
Originality, creativity	Sociability	Agreeableness	Prosocial influence motivation	Extroversion
Personal integrity	Initiative	Conscientiousness	Adjustment	Dominance
Self-confidence	Persistence	Emotional stability	Self-confidence	Masculinity
	Self-confidence			Conservatism
	Alertness			
	Cooperativeness			
	Adaptability			
Northouse (1997)	Bass (1990)	Yukl (1998)	Kirkpatrick & Locke (1991)	Yukl & Van Fleet (1992)
Self-confidence	Adjustment	Energy level and stress tolerance	Drive (achievement, ambition, energy, tenacity, initiative)	Emotional maturity
Determination	Adaptability	Self-confidence	Honesty/integrity	Integrity
Integrity	Aggressiveness	Internal locus of control	Self-confidence (emotional stability)	Self-confidence
Sociability	Alertness	Emotional maturity		High energy level
	Ascendance, dominance	Personality integrity		Stress tolerance
	Emotional balance, control	Socialized power motivation		
	Independence, nonconformity	Achievement orientation		
	Originality, creativity	Low need for affiliation		
	Integrity			
	Self-confidence			

H1: Personality traits have a direct impact on leadership effectiveness.

2.4 Behaviour Theory

The leader behaviour theory has influence almost all of the theories related to leadership this influence can be seen on (Blake and Mouton, 1964) decision-making grid model their work related transformational and transactional leadership, contingency model proposed by (Fiedler, 1967) and the full range model of leadership proposed by (Bass, 1985; Podsakoff, MacKenzie, Moorman & Fetter, 1990; Avolio et al., 2003;).

(D.Derue et al., 2011) note this fact and state that leadership paradigm was the base for development of new theory i.e. behavioural leadership theory but also provided bases for meta-analytic works to support the new theory. They also advance the argument that leader behaviours

¹ The above figure is adapted from Judge et al., (2002b), 'Personality and leadership: a qualitative and quantitative review', *Journal of Applied Psychology*, 87, 765–80.

are very crucial in order to forecast leadership worth. Same idea was also supported by (Coons, 1957; Stogdill, 1963; Judge & Piccolo, 2004; Judge, Piccolo & Ilies, 2004). Even though above mentioned investigation has already recognized that leadership worth is greatly influenced by both frontrunner behaviours and actions, but researchers have failed to establish whether both of the factors compliment leadership effectiveness or supplement it. At the same time they have not developed any model that integrates both of these factors.

The literature regarding the topic can be classified in to three main categories (1) demographics, (2) characters related to task competency, plus (3) interpersonal characteristics (Yukl, Gordon & Taber, 2002; Avolio et al., 2003; Bass & Bass, 2008; D.Derue et.al, 2011). At the same time leader behaviours can be classified in to whether the behaviour is focused in the direction of (a) task processes, (b) interpersonal dynamics, or (c) change. One of the major drawbacks has been that scholars created new theories and conducted research but they did not establish whether the existing theories were uneducated or not. Behavioral scientists were least interested in comparing new theories with existing ones or integrating these theories (D.Derue et al., 2011).

2.4.1 Conflict Management Styles

(Rahim, 1992, p.16) defined conflict is the process of interaction revealing in harmoniousness, dissimilarity or dissention within or between societal individuals. When people perceive that others are avoiding themselves in order to attain the objectives, only then relational skirmish occurs. Conflicts have to be managed within shortest possible time frame by applying conflict resolution approaches.

It is well known fact that human behaviour cannot be curtailed due to uniqueness of their personalities, there is always a real possibility that conflicts might arise between them. These conflicts can range from individual level to groups. Another aspect which complicates the conflict is that the every individual in group might have his/her own agenda of interest to pursue in conflict situation (Friedman *et al.*, 2000). There is no denying role of conflicts in shaping our attitudes towards any particular subject but they need to be resolved on timely basis in order to keep the social setup in order. If they are allowed to get out of hand, due to inaction the costs in terms of resources such as money, time and social imbalance are high. Each conflict has different dimensions and different stake holder so they have to be treated separately but they are studied under few broad categories which are commonly referred to as “Conflict management styles”.

The impacts of these conflicts are more apparent on projects simple because of constraints like time, human resource and money (PMBOK, 2004). Thus project managers have to adopt much stricter measures as compared to normal and daily working environment. The project managers have to ensure the quality of the project does not suffer because of these constraints and conflicts that might arise with in the workforce and with other stake holder.

(Rahim et al., 2001) proposed conflict management styles remain the approaches utilized to respond towards professed mismatches in societal situations. (Rahim et al., 1983) describes earlier five factor model of in terms of conflict management styles, as most consistently used model when it comes to literature studies related to conflict management. . He further adds that model helps to manage the concern for one self and others. These styles consist of participating to resolve conflicts, evading conflicts, kind negotiating during conflict resolution and governing. (Pratt and Rubin, 1986) hold that five factor model to handle conflict has received empirical support too. Prior research addressed on the associations between five conflict styles and leadership effectiveness and hypothesis was established. Thus an appropriate way is to do valid study on project managers and results can be interpreted and applied to real life scenario.

2.4.1.1 Integrating

Integrating style is utilized through collaboration (Rahim et al., 1983) in order to minimize the conflicts that might arise with in organization at an individual or group level. Takes into account numerous viewpoints of the stake holders and considers insights from different standpoints; leads to agreement and promise and creates win-win situation (Gross & Guerrero, 2000); (MacIntosh & Stevens, 2008) both stated that it is one of the most effective way to address the different issues related to conflict management within the organization and provides long-term resolution for conflicts and eradicates resentment amongst the stake holders

2.4.1.2 Dominating

According to (Carnevale and Isen, 1986), this approach focuses on one's own interest as compared to that of others; Individuals who adopt this strategy raise their social standing with in an organization. Previously researcher such as (Gross and Guerrero, 2000) proposed that this

technique is more viable in terms of solving conflicts or resentment is created and is shown in one form or the other by subordinates or stake holders and may create problems in future. Now a day this style is rarely adopted simply because of the possibilities of social backlash.

2.4.1.3 Compromising

The main feature of this approach is to reach some sort of compromise or to create a win-win situation. (Blake and Mouton, 1964) propagate this technique as this allows one to reach a solution which allows one to reduce or eliminate the chances of social backlash. Which might arise due to autocratic decisions, which are perceived by one part/group as insufficient and they might feel that it is forced upon them even if it is in their interest. (Carnevale and Isen, 1986) have held that this approach results in decisions that are perceived by both parties involved in conflict as rational. This style searches for good deal of solutions through which certain degree of self-satisfaction comes for all parties involved in conflicts.

2.4.1.4 Avoiding

Avoiding refers to show minimum appreciation for one self and equally minimum appreciation for others. (De Dreu & Van der Vliert, 1997) have criticized this approach as ineffective and non-productive towards conflict management because of the fact that individuals fails to solve the underlying problem and withdrawal from actual or potential conflict state is witnessed (Bass, 1985) relate to weakness in leadership research to initiate a positive dialogue because sometimes leaders are less keen to concentrate on weaknesses. This lack of attention is usually perceived as weakness and results in more conflicts arising in future.

2.4.1.5 Obliging

The main focus of this approach is giving benefit to other as compared to one's own self. The management who adopts this style will forgo their own benefits to satisfy the others involved in the conflict (Carnevale and Isen, 1986). So it is considered as selfless approach towards managing any conflict. This approach has been criticized by academics like (Friedman et al., 2000); (Gross

and Guerrero, 2000). Their point of view is quite different from that of (Carnevale and Isen, 1986) on the ground that it is similar to surrendering all power to other party by caving in their demands. But at same time they hold that it can use as a tool to reduce relationship conflicts.

2.4.2 Conflict Management Styles and Leadership Effectiveness

Previous research showed that Conflict management styles have great impact on leadership effectiveness (De Dreu et al, 2001; Friedman et al., 2000). It is considered as basic quality of leader i.e. how does he/she manages the conflicts arising with in his/her team. Ideally the effective leaders manage conflicts in such way that all of the parties involved in the conflict come out as winners. Personalities having extrovert behaviour, show positive association towards the avoiding style and negative association on the way to prevailing way (Antonioni, 1998). (Moberg, 2001) proposed connection amongst various personality traits and conflicts management styles and extracted that Neuroticism as it shows positive relationship to Avoiding style and Compromising style and having a negative relationship to Conflict. In this research same results are expected from project managers. (Antonioni, 1998) proposed that there is a positive association amongst agreeableness and conflict management styles. (Moberg, 2001) reported findings that there is constructive association amongst agreeableness and compromising style to manage conflict and negative relationship to direct and control. Matching outcomes are predicted from project managers. The personality having openness to experience personality trait may apply direct confrontational approach when faced by conflicts (Tjesvold, 1998). (Antonioni, 1998); (Moberg, 2001) testified that there is positive relationship among openness to experience and conflicts and also cooperative actions determined the same findings. (Antonioni, 1998); (Moberg, 2001) reported same findings that there exists positive linkage amongst conscientiousness and conflict nevertheless similarly adverse association with conflict management styles. Same outcomes are predicted by such population of project managers. Various studies conducted on Leadership have reported that individual behaviours exhibit direct association with leadership effectiveness. (Friedman *et al.*, 2000) have found positive correlation between integration and leadership effectiveness. (De Dreu et al., 2001) have found constructive association between this approach and leadership effectiveness. Therefore we can reject the previous approach which labels it as half-hearted approach to conflict resolution.

H2: Conflict Management Styles have a direct and significant impact on Leadership Effectiveness.

2.4.3 Personality and Conflict Management Styles

Research by (Bell & Blakeney, 1977; Jones & Melcher, 1982) showed that the level of agreeableness comes down forcing/competing style of leadership when compared to smoothing or obliging (accommodating) style while (Jones & White, 1985); (Schneer & Chanin, 1987) also came to similar conclusion. The researchers came to similar verdicts (Bell & Blakeney, 1977) and (Jones & Melcher, 1982).

(Moberg, 2001) suggested that there exists a positive correlation amongst extroversion personality trait and conflicts management styles. (Antonioni, 1998) suggested a positive relationship amongst agreeableness and conflict resolution styles. Same findings were reported by (Antonioni, 1998) and (Moberg, 2001) found constructive relationship amongst extroversion with both integrating and dominating conflict management styles. Person who possess trait of Openness to Experience as part of his personality may be more prone to aggressive approach to conflict management. (Tjesvold, 1998) (Antonioni, 1998); (Moberg, 2001) found positive relationship amongst conscientiousness and clash while found negative relationship of conscientiousness with avoiding style of conflict management.

Existing research considers Personality as an antecedent to Conflict management styles. Predicting the styles to resolve conflicts has been subject of extensive studies over the time. (Friedman et al., 2000) had argued that the conflict management style depends upon present situation, past scenario and possible future outcomes. (De Dreu et al., 2001) also agreed with the findings of Friedman via their research. This also enforces the practicality of their research as most of the project managers (working in the field) also agree with this notion.

The research of (Carnevale & Isen, 1986) suggested that any approach adopted by individual is mostly based upon the situational circumstances rather than the past history or future outcomes of any decision. All of these studies point to lack of consensus on a single approach towards conflict management.

According to (Tupes and Christal, 1961) the focus of pervious research has been inspecting the association between personality traits and the conflict management styles in context of five-factor theory. The research conducted by (Costa & McCrae, 1992) and Goldberg (1993, 1999) also

backed this notion. Although this theory had been around for many decades but was not recognised as genuine theory until Costa and McCrae (1992) firmly established the relationship between these factors of personality and from that point onwards it was regarded as genuine theory. According to this theory personality can be studied by the study of five independent dimensions as mentioned above. These factors are responsible for shaping the individual personalities. This theory was based upon the procedures and tests designed by (Sternberg and Soriano, 1984).

Researches conducted by (Bass, 1985); (Bass, Avolio & Goodheim, 1987); (Waldman & Einstein, 1988); (Howell & Frost, 1989); (Avolio, Bass & Yammarino, 1991); (House & Howell, 1992); (Curphy, 1993); (Conger & Kanungo, 1998); have proven that charismatic leaders are very effective as they induce team spirit and thus they improve overall performance of team and individuals. Due to their charisma they are able to achieve great following and their approval rating are very high amongst the followers, at the same time they are able to elevate the morale and satisfaction amongst the followers. Besides that they are able to achieve high performance appraisal ratings from their superiors. All of these factors are reflected in improved project team performance, when compared to non-charismatic leader's approach.

H3: Personality Traits have direct and significant impact on conflict management styles.

2.4.4 Personality, Conflict Management Styles and Leadership Effectiveness

From the above discussion, it is concluded that while personality affects leadership effectiveness (Trait theory), conflict management styles affect Leadership effectiveness (Behavioural theory). Thus it can be hypothesized that conflict management styles mediate the relationship between personality and leadership effectiveness.

Leaders perform various roles in order to resolve interpersonal conflicts between subordinates and this is critical for every project success (Mintzberg, 1975). (Luthans et al., 1985) revealed that successful managers / front-runners utilized 26 per cent of available schedule in order to manage employees. At the same time 60 per cent of their time was spent on managing and resolving conflicts arising between different levels of employees working for them. Recent study is conducted on the association between the personality traits, leadership effectiveness and the indirect impact of conflict management styles on leadership effectiveness (Barbuto et al, 2010).

2.5.1 The Research Model

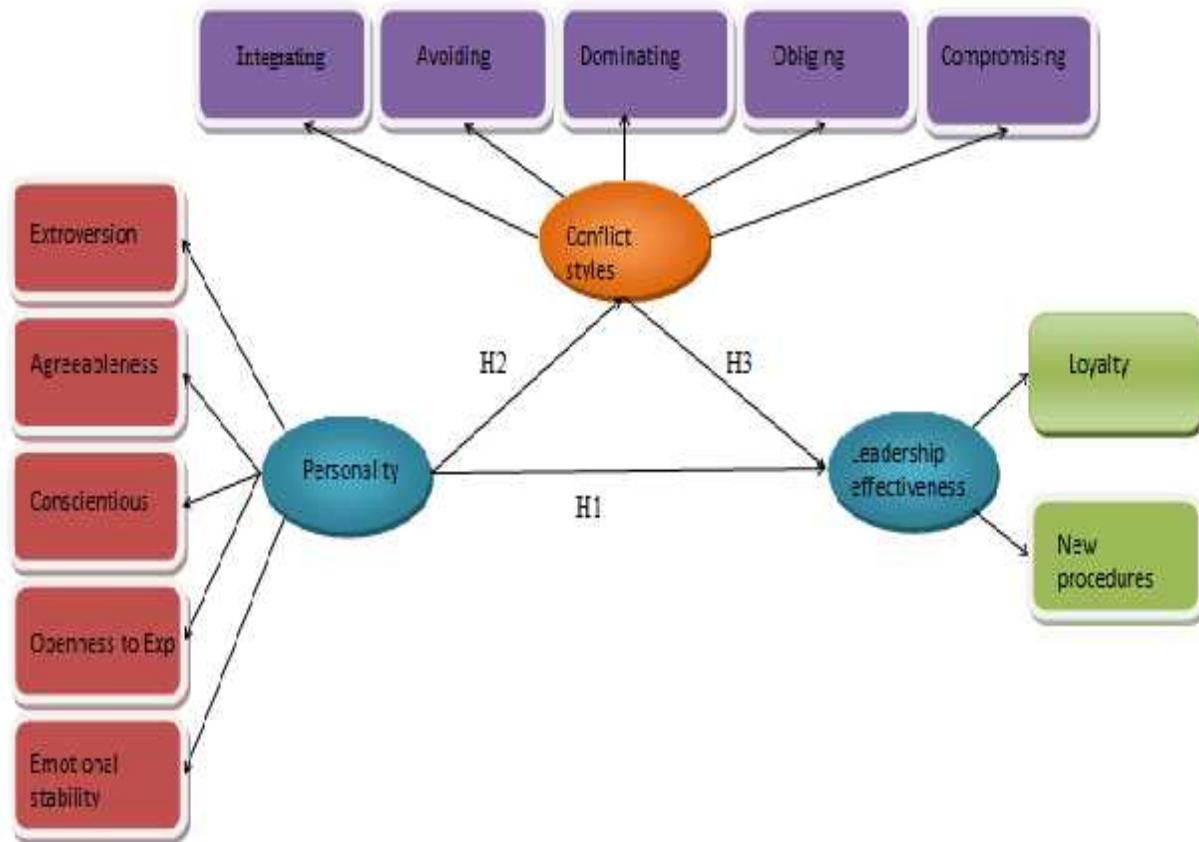
(Barbuto et al, 2010) yielded the associations between personality traits, conflict management styles and leadership effectiveness which is further elaborated in research Model showing the hypothesized relationships between BIG 5 Personality Traits, Conflict Management Styles, and Leadership Effectiveness (Figure 2.3). The model is built on the trait theory and leader behavioural theory. In project management specific method of resolving conflict depend largely on the Personality traits possessed by the project managers.



The above figure represents the three observed variables 1) Big 5 Personality traits which is an independent variable, 2) Conflict Management Styles which is a Mediating Variable, 3) Leadership effectiveness which is a Dependent Variable. (Barbuto *et al.*, 2010) and (Abujarad et al., 2010) had also applied and tested BIG 5 Personality Traits on Leadership effectiveness through conflict management styles and since this research uses combination of both models.

H4: Personality Traits have indirect and significant impact on Leadership effectiveness through conflict management styles.

Research Model



This model tends to explain distinctive styles or strategies used by effective leaders through the nature of their work on the basis of behavioural theory. According to (Zaccaro, 2007) combinations of traits and strategies, integrated in conceptually meaningful ways, are more likely to predict leadership effectiveness. (Connelly et al., 2000) further adds to the notion that strategies implied by the leadership arbitrate the association amongst character in addition to consequences. Therefore, link between personalities (trait) to leadership effectiveness (outcome) through conflict management style (strategy) can be established and further explored in different situations and scenarios. The leadership styles and effectiveness of the leadership depends upon the behaviour of the leader in context to the above mentioned traits.

2.6 Chapter Summary

The present chapter argues that Leadership trait theory alone cannot explain variance in leadership effectiveness. Hence building on existing literature, a research model is proposed which considers leader behaviour theory along with Leadership trait theory to explain leadership effectiveness. The model further proposes that personality has an indirect effect on leadership effectiveness through conflict handling styles. The next chapter, therefore, discusses the methodology adopted to test the hypotheses formulated in this chapter.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter outlines the methodology adopted and procedures applied at various stages of the research process. This study adopted a quantitative approach and quantitative methods were utilized to examine the direct and indirect association hypothesized amongst traits possessed by individuals, styles to manage conflict, and leadership effectiveness. The chapter includes the following: data collection procedures, variables and measures, and data analysis procedures.

3.2 Data Collection Procedure

The data on variables of interest was collected using a personally administered questionnaire in a survey of project managers across Pakistan. In doing so, researcher contacted the respondents personally and briefly described the study and its objectives. The respondents were given an informed consent form and were informed of their rights. This method of data collection is less expensive and facilitated in a fruitful way within short time span. Personally administered questionnaire provided the researcher a chance to present the research topic to the respondents and motivated them to provide honest answers to the questionnaire. The first page of questionnaire has cover letter to clarify the research objective and consent box for the respondent (if he/she is willing to fill). This was undertaken to motivate project managers to participate in the study voluntarily to ensure them the confidentiality of the data. After the completion of the personality inventory, conflict resolution inventory, and leadership effectiveness instruments, the respondents returned the questionnaires back to the researcher. The participants also provided their demographic information. This research is a cross sectional study and collection of data is undertaken as only once. Research provides detail of concepts and theories required to analyse the relationship between personality traits, conflict management styles and leadership effectiveness. This endeavor is undertaken in natural environments of projects in various organizations as a correlational study in which the interference of the researcher was very limited so that the natural flow of work should not be disturbed. This is ensured that researcher have not modified the natural setup of the work place where projects are undertaken. The study setting is ensured as non-contrived because the data is collected from the project managers working in their daily routine.

The following table (Table 3.1) provides details of respondents (N=308) who participated in the study, industry wise.

Table 3.1: Number of respondents industry wise

Sr.no	Industry	Project Managers
01	Construction	16
02	IT/Software	69
03	Banking and Insurance	9
04	Telecommunication	23
05	Education	47
06	Mining	65
07	Others	79

3.3 Variables and Measures

3.3.1 Personality

Personality was measured using Big 5 personality questionnaire “The Five Factor Model of personality”(Digman, 1996); (Costa and McCrae, 1991). Each of the five dimensions were measured using 10 items (total of 50) using a seven-point Likert scale, the scale ranged from 1 (strongly disagree) to 7 (strongly agree). The five dimensions comprised of extroversion, agreeableness, conscientiousness, openness and emotional stability. The subscale items were combined together to reflect the scores for five dimensions of personality. As per the questionnaire which is attached in the appendix few items to answer various dimensions of personality are written as Angry vs. Calm, Tense vs. Relaxed, Uncultured vs. Cultured and Unfair vs. Fair etc.

3.3.2 Conflict Management Styles

Conflict management styles were measured using Rahim's Organizational Conflict Inventory-II (ROCI-II) (Rahim, 1983). Each of the five dimensions was measured using (total of 26) items. Using 7 point Likert Scale. The Scale range from strongly disagree to strongly agree. The total score on the subscale items was utilized to reflect the score for five dimensions of conflict management styles. Few items to measure conflict management styles are highlighted as per the questionnaire which is attached in the Appendix:

1. I try to investigate an issue with my Project team member to find a solution acceptable to us.
2. I generally try to satisfy the needs of my Project team members.
3. I try to not to see my project team member and avoid the current situation.
4. I try to integrate my ideas with those of my Project team members to make a decision jointly etc.

3.3.3 Leadership Effectiveness

Leadership effectiveness was measured using (Yau, 2003) scale comprised of two dimensions i.e. 1) adopting new procedure, 2) achieving employees loyalty and are measured through seven point Likert scale ranging from 7 (strongly agree) to 1 (strongly disagree). Total of 13 items in which first six are related to achieving employee loyalty and rest of seven items are related to adopting new procedures. The total score on the sub scale items are here to reflect the scores for two dimensions of leadership effectiveness. Few items to measure adopting new procedures and achieving employees loyalty under leadership effectiveness are highlighted as per the questionnaire which is attached in the Appendix:

- 1) Accomplish the prime assigned tasks by high-level management.
- 2) Achieve the department's committed goals and objectives
- 3) Create greater cohesiveness among subordinates
- 4) Reduce employee turnover rate.
- 5) Reduce possible resistance by followers on leader's request etc.

3.3.4 Demographics

Various demographic variables were also included in the survey to develop a profile of project managers. Sample demographic variables include: gender (1=Male, 2= Female), age(1 = 20-24, 2= 25-29, 3= 30-39, 4 = 40-49, 5=50-59 and 6 =60 and above), academic qualification(1=Bachelor's degree, 2=Masters, 3=PhD, 4=others) professional qualification(1=program management professional,2 = project management professional, 3=None) training(1 = less than a day, 2= one to less than two days, 3= two to less than five days,4 = five or less than 10 days and 6 =10 days or more), job tenure(1=less the one year's 2=1 to less than 2 years, 3= two to less than five years, 4 = five to less than 10 ten years and 5 = 10 years or more), organizational tenure(1=less the one year's 2=1 to less than 2 years, 3= two to less than five years, 4 = five to less than 10 ten years and 5 = 10 years or more) etc.

3.4 Data Analysis Techniques

The data analysis procedure started with data compilation, screening, descriptive statistics to analyse the demographic profiles of the respondents, assessment of reliability of measures, and correlation. Statistical Package for Social Sciences (SPSS) software is utilized to have descriptive statistical analysis in this study. Furthermore, the hypotheses were tested using Structural Equational Modeling (SEM). (Westland, 2010) yielded that "Structural Equational Modeling" is a technique which is widely used by social scientists and practitioners. SEM also takes into account the picture of the measurement errors that are universal in most fields and typically contain variables (Raykov & Marcoulides, 2006, p.1). SEM was used for its ability to measure and test all the hypothesized relationships existing between various constructs at one go.(Jorekog et al., 1996).

A two-step procedure was adopted to test the hypothesized relationship (Anderson and Gerbing, 1988). In the first step a measurement model was tested. In the second step structural model considering of hypothesized paths was estimated. Researchers take great deal of help from Measurement model which explains the reliability of latent variables and correlations among the

variables. The Structural Model outlines linear association amongst latent variables and provides path coefficients of the model (Mahmood et al., 2011).

Building and examining the Measurement model is termed as Confirmatory Factor Analysis (CFA) which is based on the previous work done by (Howe, 1955); (Anderson and Rubin, 1956) and (Lawley, 1958). Serial fit indices are available to determine the fit of the model to observe the data e.g. CFI, TLI and RMSEA.

SEM was performed, using AMOS 7, to analyse the proposed model. Each of the five dimensions of personality, five dimensions of conflict management styles and two dimensions representing leadership effectiveness. Analysis was loaded onto personality, Conflict management styles and leadership effectiveness respectively. After the factor structures were validated, items representing the respective factors were aggregated to represent five personality variables, conflict variables and leadership effectiveness variables. Lastly, a path analysis was performed to check the hypothesized associations between five character variables, five conflict variables and two leadership effectiveness variables. This procedure was adopted since the sample size was small. The ratio of subjects to variables is a better guideline for assessing sample as small or large e.g. (Gorsuch, 1983); (Hatcher, 1994) recommend a minimum subject to item ratio of at least 5:1. However (Nunnally, 1978) recommended that the subject to item ratio should be at least 10:1. Failure to have a representative sample of sufficient size may result in unstable loadings (Cliff, 1970). We have a subject to item ratio of less than 1:5.

Personality is considered an independent latent variable loaded on to five observed variables namely extroversion, agreeableness, conscientiousness, openness, and emotional stability. Conflict management styles are used a dependent latent variable loaded on to five observed variables namely, integrating, avoiding, dominating, obliging, and compromising. Furthermore, leadership effectiveness is a dependent variable loaded on to two observed variables achieving employees' loyalty and adopting new procedures. The structural model tests the relationship between Personality, conflict management styles and Leadership effectiveness. The model's fitness was analysed and assessed by using several fit indices such as χ^2/df , CFI, RMSEA. Chi-square was divided by the associated degree of freedom (χ^2/df) and cut off for this measure is $(3 < \chi^2/df < 5$ Good) < 3 which is excellent (Bollen, 1989); (Kline, 1998). In order to find out the variations amongst population covariance and population implicit covariance matrix, Root Mean

Square Error of Approximation (RMSEA) is observed ($RMSEA < 0.08$); In comparison to the null model Comparative Fit Index ($CFI > 0.90$ Good, $CFI > 0.95$ Excellent) was assessed; and in order to find out the variations amongst the sample covariance matrix and the sample implicit covariance matrix Goodness of Fit Index ($GFI > 0.90$ Good, $GFI > 0.95$ Excellent) was assessed. (Colquitt, 2001) described that Root Mean Square Error of Approximation (RMSEA) examines the questions “How well would the model, with unknown but optimally chosen parameter value, fit the population covariance matrix if it were available?” (Browne & Cudeck, 1993). RMSEA is utilized to extract the error of approximation in the population and Incremental Fit Measures are addressed to measure the fitness of the research model (Bollen, 1989) and (Kline, 1998) (CFI and TLI).

3.4.1 Data Screening / Descriptive Statistics

Before the data file was subjected to analysis, the data was carefully screened for missing values, outliers, normality, and multi-collinearity. There are three basic options available when dealing with missing data: list-wise deletion; pair-wise deletion; and imputation (Tabachnick & Fidell, 2001); (Kline, 2010). In the present study, missing values were imputed to avoid an inadequate sample size or loss of meaningful data. There were very few missing values (ranging between 1-2 missing values) for most of the items. Furthermore, no cases were falling outside the limits ($Q1 - 1.5 IQR$, $Q3 + 1.5 IQR$) hence there were no outliers in the data. Skewness and kurtosis (Hair, Anderson, Tatham, & William, 1998); (Tabachnick & Fidell, 2001) were also used to describe non-normality. (Tabachnick & Fidell, 2001) suggested that value of skewness and kurtosis should be within the range of -2 to 2 when the data is normally distributed. All the data were in the acceptable range.

3.4.2 Reliability

The reliability of the constructs measured through Cronbach’s alpha (). Internal consistency is the most popular of all methods for assessing scale reliability. (Churchill Jr, 1979) advocated the

use of Cronbach alpha () for assessing the quality of scale. Cronbach alpha reflects how well various items in a scale, measuring the same construct, yield similar results. A low Cronbach alpha score indicates that some items do not share the similarity and, therefore, the poor performing items should be identified and discarded before proceeding further. Where there is no absolute guideline on the acceptable level of Cronbach alpha, (Nunnally and Bernstein, 1994) has suggested a reliability of 0.5 – 0.6 for basic research and (Gerbing, Anderson, Greene, & Carmines, 1988) have suggested an alpha value of 0.70 and above as reliable. The result of reliability analysis of each construct was performed and the results are reported in next chapter (Chapter 4).

CHAPTER 4: RESULTS AND DISCUSSION

4.1 Introduction

The aim of this present study is to examine the relationship between personality traits, conflict management styles on leadership effectiveness. In this regard, results are discussed in this chapter in detail starting from respondent's profile, Descriptive Statistics and Reliability of measures, bivariate correlations followed by Structural Equational Modeling Analysis showing the linkages among constructs. A discussion of findings is also provided along with the specified future areas.

4.2 Respondents profile

For purpose of this research data were collected from 308 project managers from a variety of organizations in Pakistan. The data collection took place at various areas of Punjab, KPK and Capital territories. 82% of the project managers were male while only 12% were women. A great majority of project managers (69%) were young (25-39 years). Approximately 5% of the project managers were old (50 years or above).

Majority of the project managers had a master's degree (58%), 25.60 per cent had Bachelor's degree, only 7% had doctorate while there remaining possessed unconventional qualifications. When it comes to professional qualifications 12.30 % of the respondents possessed certifications of Program Management Professional, 23.40 % of the respondents held Project Management Professional qualification and rest did not possess any professional qualifications.

Amongst the respondents 35% have tenure of 2-5 years whereas 26% had tenure of 5 years or more. Furthermore, 57% have up to 2 years of project management experience. 54% of project managers have contractual jobs; 36% have permanent jobs and 10% have temporary jobs. All project managers were supervising at least 5 employees. These project managers are employed in various industries including construction (5%), IT (22%), banking and insurance (3%), telecommunication (7%), education (15%) and mining (21%), remaining 25.6% belonged to social sector. Great majority of project managers (52%) were earning less than rupees 45000 per month, 18% are earning between 45000-65000 rupees, 11% are earning between 65000-85000 rupees,

5% are earning between 85000-100000 rupees, and 14% are earning more than 100000 rupees. The respondents profile is given in Table 4.1.

Table 4.1: Demographic profile of respondents

Demographics	No. of Respondents	Percentage
Gender		
Male	253	82%
Female	55	18%
Age		
20 to 24	44	14.30%
25 to 29	117	38.00%
30 to 39	97	31.50%
40 to 49	35	11.40%
50 to 59	14	4.50%
60 above	1	3%
Academic qualification		
Bachelors	79	25.60%
Master	180	58.40%
PhD	7	2.30%
Others	42	13.60%
Professional qualification		
Program Management Professional	38	12.30%
Project Management Professional	72	23.40%
None	198	64.30%
Training during the last 12 months either paid or by employer		
Less than a Day	72	13.40%
1 to Less than 2 Days	57	18.50%
2 to Less than 5 Days	73	23.70%
5 to Less than 10 Days	46	14.90%
10 Days or more	54	17.50%
Organizational Tenure		
Less than 1 year	68	22.10%

1 to Less than 2 Years	50	16.20%
2 to Less than 05 Years	109	35.40%
5 to Less than 10 Years	47	15.30%
10 Years and above	34	11.00%
Project Management Experience		
Less than 1 year	115	37.30%
1 to Less than 2 Years	62	20.10%
2 to Less than 05 Years	66	21.40%
5 to Less than 10 Years	36	11.70%
10 Years and above	29	9.40%
Job contract		
Permanent	110	35.70%
Temporary	31	10.10%
Contractual	167	54.20%
Supervisory responsibilities		
Up to 5 employees	141	45.8
between 6-10 employees	64	20.8
between 11-20 employees	28	9.1
More than 20 employees	75	24.4
Ethnicity		
Punjabi	131	42.50%
Sindhi	3	1.00%
Balochi	3	1.00%
Pushtoon	139	45.10%
Gilgit /Baltistan	5	1.60%
Others	27	8.80%
Industry		
Construction	16	5.20%
IT/Software	69	22.40%
Banking and Insurance	9	2.90%
Telecommunication	23	7.50%
Education	47	15.30%
Mining	65	21.10%
Others	79	25.60%
Salary		
Less than 45000	161	52.2

45000 to Less than 65000	55	17.9
65000 to Less than 85000	33	10.7
85000 to Less than 100000	15	4.9
100,000 or more	44	14.3

4.3 Descriptive Statistics and Reliability of Measures

The descriptive statistics such as mean scale score(M), Standard Deviation(SD), skewness , Kurtosis and reliability() measures are reported in Table 4.2. Of personality variables, the variable ‘conscientiousness’ showed the highest consistency among the items (= 0.868), showing that it can be used as a single index. The Mean score (M=5.8, SD=0.87) indicate that on average project managers agreed that they have predetermined behaviours i.e. they are generally efficient and organized. Other personality traits also exhibited acceptable personality e.g. extroversion (= 0.847, M=5.4, SD=0.92), agreeableness (= 0.816, M=5.1, SD=0.71), openness to experience (= 0.852, M=4.93, SD=0.83), and emotional stability (= 0.810, M=5.11, SD=0.94) have also shown good reliability.

Of the conflict management styles variables, the variable ‘integrating’ showed the highest consistency among the items (= 0.861). The Mean score (M=5.13, SD=1.18) indicate that on average project managers agree on managing conflicts through integrating/ Collaboration. Past literature has also shown that this is the most effective style of conflict management (e.g. Gross & Guerrero, 2000; MacIntosh & Stevens, 2008). Other conflict handling variables namely, compromising (= 0.71, M=4.8%, SD=0.99), avoiding (= 0.63, M=4.25, SD=1.06), obliging (= 0.68, M=4.88, SD=1.08), and dominating (= 0.69, M=3.87, SD=1.31) have also exhibited acceptable reliability.

Furthermore, of leadership effectiveness variables, the variable ‘achieving employees loyalty’ showed the highest consistency among the items (= 0.92, M=5.51, SD=1.24). The second dimension of leadership effectiveness, adopting new procedures (= 0.84, M=5.08, SD=1.18) has also shown acceptable reliability. Thus, the resulting scales for all variables have demonstrated acceptable reliability and the items for each scale can be averaged together to compute scale composites. Furthermore the skewness and kurtosis are all within the acceptable range. Hence, data is considered fairly normal.

Table 4.2: Mean, Standard deviation, Skewness, Kurtosis, Cronbach, Items Description

Variable	Mean	SD	Skewness	Kurtosis	Cronbach	Items
Personality						
Extroversion	5.35	0.92	-0.77	1.12	0.847	10
Agreeableness	5.11	0.71	-1.01	1.16	0.816	10
Conscientiousness	5.8	0.87	-0.32	1.26	0.868	10
Openness to Experience	4.93	0.83	-0.57	1.24	0.852	9
Emotional Stability	5.11	0.94	-0.51	1.20	0.810	10
Conflict Management Styles						
Integrating	5.13	1.18	-0.80	0.91	0.861	7
Compromising	4.86	0.99	-0.59	0.67	0.708	6
Avoiding	4.25	1.06	-0.11	-0.52	0.628	5
Obliging	4.88	1.08	-0.58	0.45	0.680	4
Dominating	3.87	1.31	-1.09	1.52	0.686	4
Leadership Effectiveness						
Adopting new procedures	5.08	1.18	-1.09	1.52	0.843	6
Achieving employees loyalty	5.51	1.24	-1.21	1.78	0.921	7

4.4 Bivariate correlations

Table 4.3 report the bivariate correlations amongst the studied variables. Personality, Conflict Management Styles and Leadership Effectiveness exhibited weak to moderate relationships between them. Personality measures showed a weak to moderate relationship with conflict management style ($0.14 < r < 0.40$). All correlations were in the expected directions and statistically significant ($p < 0.05$) except for the correlations between extroversion and avoiding style ($r = 0.09$, $p > 0.05$); Agreeableness and Avoiding Style ($r = 0.13$, $p > 0.05$); Emotional Stability and Avoiding Style ($r = 0.08$, $p > 0.05$). All the personality dimensions were not correlated with the dominating style and it is not a preferred style too.

Furthermore, All personality measures i.e., Extroversion, Agreeableness, Conscientiousness, Openness to Experience, and Emotional Stability were significantly correlated with the Leadership Effectiveness measures (0.24 < 0.33) i.e. Achieving employees loyalty (=0.32, p<0.01; =0.33,p<0.01; =0.31,p<0.01; =0.31,p<0.01; =0.32,p<0.01) and Adopting new procedures(=0.24,p<0.01; =0.25,p<0.01; =0.28,p<0.01; =0.26,p<0.01; =0.22,p<0.01) respectively.

Furthermore, All Conflict management styles measures i.e. Integrating, Compromising, Avoiding, Obliging, and Dominating were significantly correlated with the Leadership effectiveness measures (0.11 < 0.54) i.e. Achieving employees loyalty (=0.54, p<0.01; =0.48,p<0.01) and adopting new procedures (=0.51,p<0.01; =0.49,p<0.01) respectively.

Table 4.3: Bi-variate correlations, composite reliability

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Extroversion	1											
2. Agreeableness	.53**	1										
3. Conscientiousness	.49**	.66**	1									
4. Openness	.65**	.55**	.51**	1								
5. Emotional stability	.52**	.51**	.47**	.57**	1							
6. Integrating	.34**	.40**	.33**	.35**	.27**	1						
7. Avoiding	.09	.13	.21**	.14*	.08	.31**	1					
8. Dominating	.04	-.12*	-.03	.03	-.02	.03	.44**	1				
9. Obliging	.25**	.21*	.25**	.27**	.21**	.59**	.42**	.33**	1			
10. Compromising	.25**	.32**	.28**	.25**	.22**	.71**	.42**	.28**	.58**	1		
11. Achieving employee loyalty	.32**	.33**	.31**	.31**	.32**	.54**	.20**	.03	.39**	.48**	1	
12. Adopting new procedures	.24**	.25**	.28**	.26**	.22**	.51**	.28**	.11*	.39**	.49**	.72**	1

** Significant at 0.01 level, * Significant at 0.05 level.

4.5 Structural Equation Modelling Analysis

4.5.1 Confirmatory Factor Analysis / Measurement Model

The confirmatory factor analysis (CFA) confirms the fitness of the model as per the fit statistics portrayed in Table 4.4. All the factor loadings were significant and larger than 0.5. The composite reliabilities (CR) are all above 0.70. Two validity measures are examined: convergent and Discriminant. Convergent validity is assessed by factor loadings and composite reliabilities (Hair et al., 1998). In this regard all factor loadings were higher than 0.6 (Table 4.5) and composite reliability was 0.7 and above (Table 4.5) Discriminant validity is examined by comparing the correlation between the construct and the square root of AVE. The Square root of AVE for all the constructs is greater than the correlations between the constructs. After validating the model, the items were aggregated to make composites.

Table 4.4: Fit indices

Fit indices	Perfect fit	Accepted fit	Path Model	Structural model
χ^2/df	$\chi^2/df < 3$	$3 < \chi^2/df < 5$	1.95	2.46
CFI	$0.97 < CFI < 1$	$0.95 < CFI < 0.97$	0.98	0.96
TLI	$0.95 < TLI < 1$	$0.90 < TLI < 0.95$	0.96	0.95
GFI	$0.95 < GFI < 1$	$0.90 < GFI < 0.95$	0.96	0.94
RMSEA	$0 < RMSEA < 0.05$	$0.05 < RMSEA < 0.08$	0.05	0.07

Table 4.5: The Measurement Model

Construct	Items	Factor loadings	R ²	CR	AVE	SQRT(AVE)
Personality	Emotional stability	0.714	0.51	0.87	0.56	0.75
	Openness	0.772	0.60	0.83	0.50	0.71
	Conscientiousness	0.673	0.45	0.86	0.53	0.73

	Agreeableness	0.726	0.53	0.85	0.52	0.72
	Extroversion	0.726	0.53	0.84	0.51	0.71
Conflict	Integrating	0.875	0.77	0.88	0.52	0.73
	Avoiding	0.436	0.19	0.67	0.49	0.70
	Dominating	0.157	0.025	0.70	0.51	0.71
	Obliging	0.694	0.51	0.69	0.50	0.71
	Compromising	0.825	0.68	0.73	0.50	0.71
Leadership effectiveness	Employee Loyalty	0.92	0.85	0.90	0.56	0.75
	Adopting new Procedures	0.87	0.76	0.85	0.55	0.73

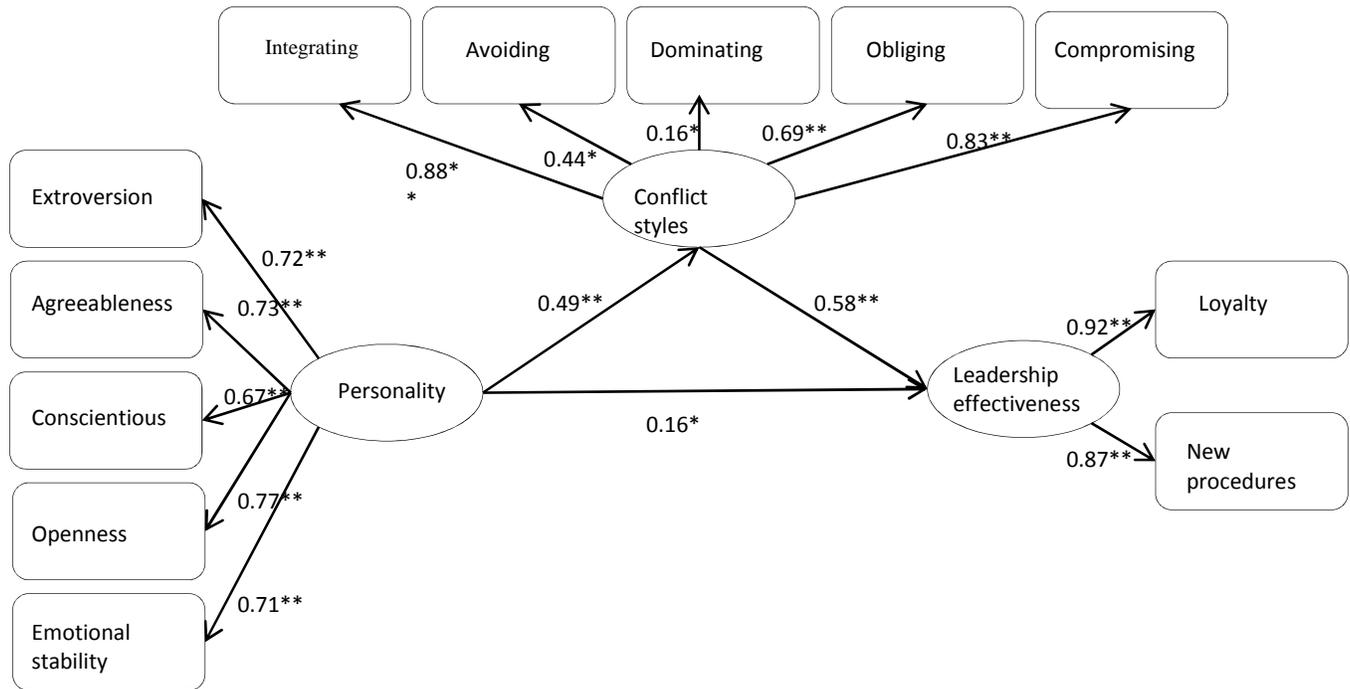
4.5.2 The Measurement Model

Structuring the equation model explain that three latent variables, namely, behaviour, conflict controlling styles, and leadership effectiveness are examined. Personality is considered an independent latent variable loaded on to five observed variables namely extroversion, agreeableness, conscientiousness, openness, and emotional stability. Conflict management styles are used a dependent latent variable loaded on to five observed variables namely, integrating, avoiding, dominating, obliging, and compromising. Furthermore, leadership effectiveness is another dependent variable loaded on to two observed variables achieving employees' loyalty and adopting new procedures. The measurement model is first examined for the fit to the data. The model achieved an accepted fit (Table 4.4) as $\chi^2/df = 2.46$, CFI= 0.96, TLI=0.95, and RMSEA=0.069 and the factor loadings are larger than 0.7, furthermore, majority of R^2 values are greater than 0.5 (see Table 4.6).

BIG 5 Personality traits, ways to manage conflicts and leadership effectiveness are measured with the support of structural equation modelling to examine the paths between them. The model explained 24 per cent of the variance in conflict management styles, and the path from personality to conflict management styles ($\beta = 0.49$, $p < 0.01$) is significant. 45 per cent of the variance is witnessed in leadership effectiveness. Positive and significant results are viewed through the direct structural paths from personality ($\beta = 0.16$, $p < 0.05$) and conflict managing styles ($\beta = 0.58$, $p < 0.01$) to leadership effectiveness (see Figure 2). The indirect effect of personality on

leadership effectiveness is significant ($\beta = 0.28, p < 0.01$). This shows that the influence of personality on leadership effectiveness is partially mediated by conflict management styles.

Figure 4.3: The structural equation model



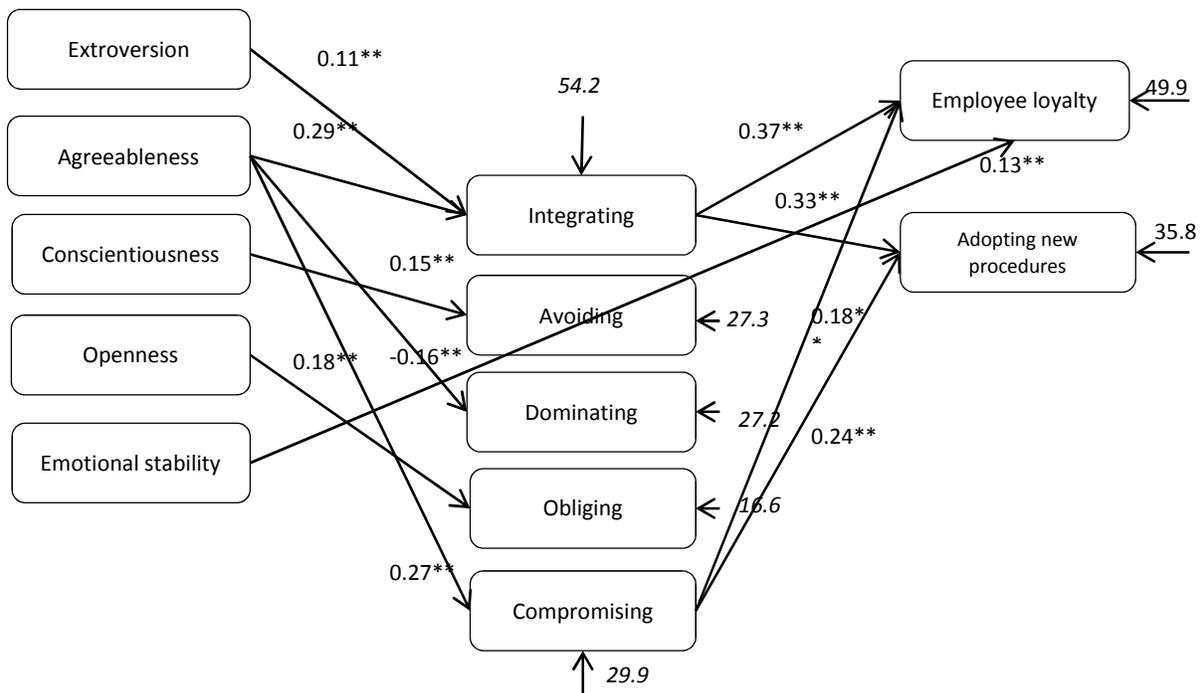
4.5.3 Path Analysis

The path model examines the routes between personality attributes, conflict management styles and leadership effectiveness. Model has achieved an accepted fit (Table 4.4) as $\chi^2/df = 1.95 < 3$, CFI=0.98 > 0.97, TLI=0.96 > 0.95, and RMSEA=0.05 < 0.08.

The outcomes of path analysis are described in Table 4.5. Results show that 27 per cent variance of the variance was explained by the model in adopting new procedures and 31 per cent variance in achieving employees' loyalty. Of the conflict management styles, the paths from the integrating and compromising styles respectively to employee loyalty ($\beta = 0.37, p < 0.01$; $\beta = 0.18, p < 0.01$) and adopting new procedures ($\beta = 0.33, p < 0.01$; $\beta = 0.24, p < 0.01$) are positively significant. Of

the personality, the path from emotional stability to employees' loyalty ($\beta = 0.13, p < 0.01$) is positively significant (see Figure 4.1 and Table 4.5).

Figure 4.1: Path model with standardized coefficients



13 per cent of the variance was explained by the model in integrating style, positive and significant results were found out from the paths from extroversion ($\beta = 0.11, p < 0.01$) and agreeableness ($\beta = 0.29, p < 0.01$) to the integrating style. Model described 2.3 per cent of the change in the avoiding styles, and the path from conscientiousness ($\beta = 0.15, p < 0.01$) to avoiding is significant. The dissimilarities clarified in the dominating and compromising styles is 2.6 and 7.5 per cent respectively, and the path from agreeableness to dominating ($\beta = -0.16, p < 0.01$) and to compromising ($\beta = 0.27, p < 0.01$) styles is significant. The variance explained in the obliging style is minimal (3.2 per cent) and the path from openness to obliging ($\beta = 0.18, p < 0.01$) is significant (see Figure 4.1 and Table 4.6).

To estimate indirect effects of personality variables on the two indicators of leadership effectiveness, e.g. (MacKinnon et al., 2002); (MacKinnon et al., 2004); (MacKinnon, 2008)

bootstrap procedures are used. We bootstrapped 1000 samples to obtain 95% bias-corrected confidence intervals. The results are reported in Table 4.6. Extroversion and agreeableness respectively have a significant effect on employee loyalty ($\beta = 0.041$, $p < 0.05$; $\beta = 0.157$, $p < 0.01$) and adopting new procedures ($\beta = 0.037$, $p < 0.05$; $\beta = 0.16$, $p < 0.01$).

Table 4.6: Path Analysis

Paths	Total effects	Direct effects	Indirect effects
Integrating <--- Extroversion	0.112*	0.112*	
Integrating <--- Agreeableness	0.289**	0.289**	
Compromising <--- Agreeableness	0.273**	0.273**	
Dominating <--- Agreeableness	-0.163**	-0.163**	
Avoiding <--- Conscientiousness	0.153*	0.153*	
Loyalty <--- Integrating	0.371**	0.371**	
Procedures <--- Integrating	0.329**	0.329**	
Loyalty <--- Compromising	0.181*	0.181*	
Procedures <--- Compromising	0.238**	0.238**	
Loyalty <--- Emotional stability	0.132**	0.132**	
Compromising <--- Openness to experience	0.179**	0.179**	
Procedures <--- Agreeableness	0.160**		0.160**
Loyalty <--- Agreeableness	0.157**		0.157**
Procedures <--- Extroversion	0.037*		0.037*
Loyalty <--- Extroversion	0.041*		0.041*

** Significant at 0.01 levels.

* Significant at 0.05 levels.

4.6 Discussion of Results

The aim of the study was to find out the direct and indirect association amongst personality traits, conflict management styles and leadership effectiveness. In this regard, data was collected from 308 project managers from various organizations of Pakistan.

Confirmatory factor analysis was used to validate the model. All the factor loadings were significant and larger than 0.5. The composite reliabilities (CR) are all above 0.70 and average variance extracted (AVE) reached the acceptable limit of 0.5 (Table 4.3) as similar to the results

extracted by (Bollen, 1989); (Kline, 1998). Same goes with TLI (Tucker Lewis fit Index) proposed by (Tucker & Lewis, 1973); (Bollen, 1989); (Kline, 1998). Goodness of fit index(GFI) value for path analysis is 0.96 which is similar to the results suggested by (Jorekog & Sorborn, 1989). Root Mean Square of Approximation (RMSEA) value for Structure Model is 0.07 which in acceptable range and is similar to the results reported by (Colquitt, 2001). Structural Equation Modeling analysis is carried out to examine associations amongst the variables (Anderson and Gerbing, 1988; Jorekog et al., 1996; Mahmood, Qureshi & Shahbaz, 2001; Westland, 2010). SEM Analysis disclosed significant associations between personality traits, conflict management styles and leadership effectiveness. SEM showed that Conflict management styles mediate the association between personality traits and leadership effectiveness. These findings are reported in literature. Main results reflect that the conflict management styles partially intermediate the association amongst personality attributes and leadership effectiveness which is similar to the results of the research study conducted by (Barbuto *et al.*, 2010). The routes are extracted through path analysis which was grounded upon research conducted by (Joreskog et al., 1996) shows the associations between personality traits, conflict handling styles and leadership effectiveness which is similar to the previous research happened in the past by (Barbuto et al., 2010). Path coefficients are extracted in this research study on the basis of the study conducted by (Mahmood et al., 2001) which revealed the similar results. Furthermore, extroversion, agreeableness, and emotional stability are important personality traits (McCrae & Costa, 1987); (Digman, 1996); (Antonioni, 1998); (Moberg, 2001); (Abujarad et al., 2010). Since, of all the five personality traits, these three are related to leadership effectiveness. The results therefore show that project managers who are extrovert, tendency to agree with others and emotional stable will make effective leaders. On the other hand, integrating and compromising are important conflict management styles since they are related to leadership effectiveness which is similar to the studies conducted by (Carnevale & Isen , 1986); (Friedman *et al.*, 2000); (De Dreu *et al.*, 2001); (Barbuto *et al.*, 2010). These findings suggest that project managers who attempt to resolve conflicts through compromising and integrating style have the potential to become an effective leader. Extroversion and agreeableness have an indirect effect on employee loyalty and adopting new procedures through integrating and compromising styles which is similar to the results explored by (Carnevale & Isen ,1986); (De Dreu *et al.*, 2001); (Friedman *et al.*, 2000).

- 1) Hypothesis H1, 'Personality traits have direct and significant impact on leadership effectiveness' is accepted. Personality trait such as Emotional Stability has a direct and significant relationship with the indicator of leadership effectiveness i.e. Achieving Employees Loyalty, similar results are reported by (Hogan and Hogan, 1996); (Judge et al., 2002 b). Project Managers always do their work in urgency and they require emotional stability to become effective leaders (Selmer, 2002).
- 2) Hypothesis H2,' Personality traits have direct and significant impact on conflict management styles' is accepted, Personality trait Extroversion is relation to integrating and the result has been reported by (Antonioni, 1998). Furthermore Agreeableness trait is significantly related to integrating and compromising styles for managing conflict (Carnevale and Isen ,1986); (Antonioni, 1998); (Friedman et al., 2000); (De Dreu et al., 2001). Project Managers should follow integrating style to resolve the conflicts with extroversion as similar to the studies conducted by (Antonioni, 1998).
- 3) Hypothesis H3,'Conflict management styles have direct and significant impact on Leadership effectiveness' is accepted, Integrating conflict management style is significantly related to Achieving employees loyalty and Adopting new procedures which is similar to the findings reported by (Gross & Guerrero, 2000; MacIntosh & Stevens, 2008). Furthermore, compromising conflict management style also is significantly related to Achieving employees loyalty and Adopting new procedures (Carnevale and Isen, 1986). These integrating and compromising styles when applied by project managers make them effective in resolving conflicts and also make them effective project managers.
- 4) Hypothesis H4, 'Personality Traits have indirect and significant impact on Leadership effectiveness through conflict management styles' is also accepted in this present study because of the indirect and highly significant relationship existed between Agreeableness, Integrating and achieving Employees Loyalty as similar to the results presented by (Philip Bardzil, Mark Slaski, 2003) whereas Agreeableness, Integrating and Adopting new procedure which is similar to the findings extracted by (McCrae and Costa, 1987); (Moberg, 2001); (Khan et al., 2012). Just significant relationship existed between Extroversion,

Integrating and Leadership effectiveness which is similar to the studies conducted by (Thomas et al., 2001). There is a highly significant relationship existed between Agreeableness and Compromising and just significant relationship exist between compromising and Leadership effectiveness which is similar to the views of the past researchers Graziano et al., (1996);Friedman et al., (2000); (Thomas et al., 2001);. Project Manager should follow agreeableness personality attribute with integration conflict management styles which in response be an effective leader (Khan et al., 2012).

CHAPTER 5 CONCLUSION AND IMPLICATIONS OF THE RESULT

5.1 Introduction

This chapter not only concludes this study, but also discuss the implications, future research areas, and limitations of existing research.

5.2 Conclusion

Overall, Extraversion, Carefulness, Openness to experience, agreeableness, along with emotive steadiness is useful humanoid traits with respect to leadership and the outcomes provide support for the through application of the five factor model in leadership research.

Consistent with the theoretical arguments, this study cannot provide support to the hypothesis that personality of project managers cause leadership effectiveness. However, consistent with the theoretical arguments, a relationship between personality traits and leader behaviour (such as conflict management styles) was found for all project managers. Furthermore, we found a significant relationship between leaders' behaviour (i.e. conflict management styles) and the leadership effectiveness. We also found that personality had an indirect impact on leadership effectiveness through leader behaviour.

Precisely from this study we know what personality factors enhance leadership effectiveness. Of these the most important factor is emotional stability. On the other hand, of conflict handling styles, integrating and compromising are most important behaviours for leadership effectiveness. The arguments presented here suggest the following conclusions: (1) personality traits of project managers cannot explain leadership effectiveness directly, (2) there is a relationship between personality traits and conflict management styles in general, (3) conflict management styles have an impact on leadership effectiveness, and finally (4) personality traits have an indirect impact on leadership effectiveness through conflict handling styles. Thus, the management of projects is not about whom you are but how you accomplish.

5.3 Implications of the study

5.3.1 Theoretical Implications of the Study

The extracted findings lead to report strong understanding about the association amongst personality traits of the project managers, their conflict controlling styles and leadership effectiveness. Research also proposed that Extroversion, Agreeableness was associated with integrating conflict handling style which is associated to both adopting new procedures, achieving employee loyalty. Moreover, compromising conflict handling styles mediated the association between Agreeableness personality trait and Adopting new procedures and Achieving employee's loyalty. Agreeableness personality trait was also associated with Dominating Conflict handling style. Conscientiousness personality trait was associated with Avoiding Conflict handling style and Openness to Experience personality trait was associated with Obliging Conflict handling style. Emotional Stability trait was having a direct association towards achieving employee's loyalty. Theoretically, the research proposed associations between the independent, mediating and the dependent variable.

5.3.2 Practical Implications of the Study

Key findings are demonstrated by this research study while checking the direct and indirect association between various personality traits of the project managers, their styles to control conflicts and their respective effectiveness in relation to adopting new procedures and achieving employee's loyalty. The result extracted from the study clearly explained the practical implications that project managers who have extrovert personality apply integrating conflict handling styles on their selves and on their employees to achieve or attain loyalty of the employees and adopting new procedures. Project Managers possessing personality trait such as agreeableness should apply integrating conflict handling style on his / her team in order to attain the loyalty of the team members and adoption of new procedures. Project Managers who have agreeableness personality trait are in common and equally follow dominating conflict management style are not leadership effective. Project Managers who have conscientiousness in

nature follow Avoidance conflict management style which doesn't make them effective. Project Managers who are Openness to explore new experiences follow obliging conflict handling style doesn't make them effective. Moreover, Project managers who are emotionally stable are associated with achieving employee's loyalty but not adapting the new procedures. Thus in the light of above mentioned theoretical and practical implications, it has been found out that project managers who are extrovert and also having agreeableness in their nature, apply integrating and compromising conflict resolution styles can adopt new procedures for the project management environment and can equally achieve loyalty of the project team members. Project Managers who have agreeableness as the part of their personality attributes and dominate at the point of handling or controlling conflict can't make themselves effective. Thus those project managers who have conscientiousness uses avoidance conflict handling conflict management styles which is not adequate to ensure their effectiveness and project managers who are open to new experiences utilize cooperative conflict resolution style but not effective. Lastly, Project managers who are emotionally stable can achieve loyalty but unable to manage conflicts. Thus project managers should polish their personality attributes and conflict controlling styles so that employees ensure loyalty towards them and new procedures are adopted for project manager's effectiveness.

5.4 Limitations of the Study

The study aims is to explore the mediating role of Conflict management styles in the association of Big 5 Personality traits and Leadership effectiveness. The studied topic and variables can be conceptualized differently because it totally based on human psychology. Studied variables in current study can be examined in different ways. Considering every dimension or construct would be difficult so certain limitations for this study are outlined as follows:

In this study we have examined five dimensions of BIG 5 Personality. Although here are many other dimensions to this but reason for choosing this model was that this model fully conceptualized as Agreeableness, emotional stability, openness to experience,

conscientiousness, and Aggressiveness. These skills are vital for any project managers, since the target of the study are project managers working in various parts of Pakistan; this validates the choice of the model. Besides that, (Barbuto *et al.*, 2010) and (Abujarad *et al.*, 2010) had also applied and tested BIG 5 Personality Traits on Leadership effectiveness and since this research uses combination of both models (as mentioned above) Combined with the time limitations and scope of the study.

Second, this study examines only five dimensions of Conflict Management Styles i.e. integrating, dominating, compromising, avoiding, obliging. Various scholars in the past have provided linkage among conflict management styles and leadership effectiveness, which have been cited and successfully tested by (Barbuto *et al.*, 2010) and (Rahim *et al.*, 1983).

Third, the study examines two dimensions i.e. adopting new procedures and achieving employee's loyalty under Leadership Effectiveness propagated by (Abujarad *et al.*, 2010). These are of the major concerns for any project manager in Pakistan considering shortage of (technical) skilled labour in the region. Other dimensions which include racial effectiveness, employment enactment etc., (Barrick and Mount, 1991, 1993); (Judge *et al.*, 2002a). Other dimensions are not tested because of the nature and scope of the study.

Since, population consists of project managers in Pakistan, a generalization of results can be made only to the project managers in Pakistan. Fifth, as questionnaire and survey is used for the collection of data therefore, due explanation is required to prove the validity of the results. The data is going to be collected at one time through questionnaire only, causality can't be inferred. Leadership effectiveness may be influenced by a range of activities other than BIG 5 Personality Traits and Conflict Management Styles.

Finally, it is time and money constraint. Being a student of MSPM, it is required to complete the study within specific time and finances are arranged by the scholar himself. Collecting data from other areas and industry would be time consuming and expensive. So expanding this study to other industry and areas may not be feasible while catering the time and money constraints.

5.5 Future Research

This research revealed a new thought which makes me record the forthcoming instructions from my thesis. For undertaking the future research the most relevant related variables should be utilized.

First forthcoming direction is unfolded from the thesis is that personality traits is important for the success of the leader governing the project. Extroversion personality attribute along with integrating conflict management styles is helpful to project managers to achieve employee loyalty. Moreover, agreeableness personality attribute is helpful with integrating conflict management style to ensure the success.

Secondly, More variables should be utilized like Leadership styles with conflict management styles as second mediator to ensure more significance of the issue. Thus this research can also be applied to other fields of experts like financial managers, Academia, Marketing professionals etc.

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SHAHEED ZULFIQAR ALI BHUTTO INSTITUTE FOR SCIENCE AND TECHNOLOGY

ISLAMABAD

Research Questionnaire

My Dear Respondent,

I am currently conducting a research project entitled “The Big Five Personality Traits and Their Relationships with Conflict Resolution Styles and Leadership Effectiveness”. This project is undertaken to complete the degree requirements of MS in Project Management (MSPM) at SZABIST, Islamabad.

You have received this questionnaire since you have been working as a Project Manager in your organization. Your name, along with some other people, was randomly selected from a list of people who are working here. This strategy is used to ensure that a representative sample of project managers is selected for this research.

I would like you to fill the attached questionnaire. Anything that you will say on the questionnaire will be kept strictly confidential. No individual names or name of the organization will be disclosed. After completing the questionnaire, return it directly to me. Finally, I would be EXTREMELY grateful and thankful to you for your kind co-operation.

Just to remind you that your participation is entirely voluntary and you can withdraw from this research at any time. If you agree to participate in this research please tick the box given below to give your consent.

Consent

Yours sincerely,

Riffat Abbas Rizvi

MSPM-4th, SZABIST, Islamabad.

Section A: Please answer all the questions about yourself:

- | | | |
|-----------|--|--|
| 1. | Are you a male or a female? | <input type="checkbox"/> Male
<input type="checkbox"/> Female |
| 2. | How old are you? | <input type="checkbox"/> 20 to 24 years
<input type="checkbox"/> 25 to 29 years
<input type="checkbox"/> 30 to 39 years
<input type="checkbox"/> 40 to 49 years
<input type="checkbox"/> 50 to 59 years
<input type="checkbox"/> 60 and above |
| 3. | What is the highest educational qualification you hold? | <input type="checkbox"/> Bachelors Degree
<input type="checkbox"/> Master
<input type="checkbox"/> PhD
<input type="checkbox"/> Other (specify): _____ |
| 4. | Do you hold any recognized professional qualifications | <input type="checkbox"/> Program Management Professional
<input type="checkbox"/> PMP |
| 5. | During the last 12 months, how much training have you had, either paid for or organized by your employer? | <input type="checkbox"/> None
<input type="checkbox"/> Less than a day
<input type="checkbox"/> 1 to less than 2 days
<input type="checkbox"/> 2 to less than 5 days
<input type="checkbox"/> 5 to less than 10 days
<input type="checkbox"/> 10 days or more |
| 6. | How many years in total have you been working at this organization? | <input type="checkbox"/> Less than 1 years
<input type="checkbox"/> 1 to less than 2 years
<input type="checkbox"/> 2 to less than 5 years
<input type="checkbox"/> 5 to less than 10 years
<input type="checkbox"/> 10 years or more |
| 7. | How many years in total have you been working as a Project Manager? | <input type="checkbox"/> Less than 1 years
<input type="checkbox"/> 1 to less than 2 years
<input type="checkbox"/> 2 to less than 5 years |

8. Is your job permanent, or is it temporary or for a fixed-term?

- 5 to less than 10 years
- 10 years or more
- Permanent
- Temporary
- Contractual

9. How many people are reporting directly to you?

10. To which of these groups do you consider you belong?

- Punjabi
- Sindhi
- Balochi
- Pushtoon
- Gilgit/Baltistan
- Others (specify): _____

11. Which of the following industry groups' best describes your expertise?

- Construction
- IT /Software
- Banking and Insurance
- Telecommunication
- Education
- Mining
- Other (specify): _____

12. How much do you get paid for your job here (monthly)?

- Less than 25000
- 25000 to less than 45000
- 45000 to less than 65000
- 65000 to less than 85000
- 85000 to less than 100,000
- 100,000 or more

13. What are the main tasks you do in your job? Please describe as fully as possible.

SECTION B: Please circle the number below that BEST characterizes you at work:

Example: (angry 1 2 3 4 5 6 7 calm: 1 means you are extremely angry while 7 means you are extremely calm.)

1	Angry	1	2	3	4	5	6	7	Calm
2	Tense	1	2	3	4	5	6	7	Relaxed
3	Nervous	1	2	3	4	5	6	7	At ease
4	Envious	1	2	3	4	5	6	7	Not envious
5	Unstable	1	2	3	4	5	6	7	Stable
6	Discontented	1	2	3	4	5	6	7	Contented
7	Insecure	1	2	3	4	5	6	7	Secure
8	Emotional	1	2	3	4	5	6	7	Unemotional
9	Guilt-Ridden	1	2	3	4	5	6	7	Guilt-free
10	Moody	1	2	3	4	5	6	7	Steady
11	Unintelligent	1	2	3	4	5	6	7	Intelligent
12	Imperceptive	1	2	3	4	5	6	7	Perceptive
13	Un-analytical	1	2	3	4	5	6	7	Analytical
14	Un-inquisitive	1	2	3	4	5	6	7	Inquisitive
15	Un-imaginative	1	2	3	4	5	6	7	Imaginative
16	Uncreative	1	2	3	4	5	6	7	Creative
17	Uncultured	1	2	3	4	5	6	7	Cultured
18	Unrefined	1	2	3	4	5	6	7	Refined
19	Unsophisticated	1	2	3	4	5	6	7	Sophisticated
20	Introverted	1	2	3	4	5	6	7	Extroverted
21	Unenergetic	1	2	3	4	5	6	7	Energetic
22	Silent	1	2	3	4	5	6	7	Talkative
23	Unenthusiastic	1	2	3	4	5	6	7	Enthusiastic
24	Timid	1	2	3	4	5	6	7	Bold
25	Inactive	1	2	3	4	5	6	7	Active
26	Inhibited	1	2	3	4	5	6	7	Spontaneous

27	Unassertive	1	2	3	4	5	6	7	Assertive
28	Unadventurous	1	2	3	4	5	6	7	Adventurous
29	Unsociable	1	2	3	4	5	6	7	Sociable
30	Cold	1	2	3	4	5	6	7	Warm
31	Unkind	1	2	3	4	5	6	7	Kind
32	Uncooperative	1	2	3	4	5	6	7	Cooperative
33	Selfish	1	2	3	4	5	6	7	Unselfish
34	Rude	1	2	3	4	5	6	7	Polite
35	Disagreeable	1	2	3	4	5	6	7	Agreeable
36	Distrustful	1	2	3	4	5	6	7	Trustful
37	Stingy	1	2	3	4	5	6	7	Generous
38	Inflexible	1	2	3	4	5	6	7	Flexible
39	Unfair	1	2	3	4	5	6	7	Fair
40	Disorganized	1	2	3	4	5	6	7	Organized
41	Irresponsible	1	2	3	4	5	6	7	Responsible
42	Undependable	1	2	3	4	5	6	7	Reliable
43	Negligent	1	2	3	4	5	6	7	Conscientious
44	Impractical	1	2	3	4	5	6	7	Practical
45	Careless	1	2	3	4	5	6	7	Thorough
46	Lazy	1	2	3	4	5	6	7	Hardworking
47	Extravagant	1	2	3	4	5	6	7	Thrifty
48	Rash	1	2	3	4	5	6	7	Cautious
49	Frivolous	1	2	3	4	5	6	7	Serious

SECTION C: To what extent do you agree or disagree with the following statements?

1 = strongly disagree, 2 = Slightly disagree, 3= Disagree, 4 = Neither Agree nor Disagree,

5 = Agree, 6 = Slightly Agree, 7 = Strongly Agree.

No.	Statements	1	2	3	4	5	6	7
1	I try to investigate an issue with my Project team member to find a solution acceptable to us.							
2	I generally try to satisfy the needs of my Project team members.							
3	I try to not to see my project team member and avoid the current situation.							
4	I try to integrate my ideas with those of my Project team members to make a decision jointly.							
5	I try to work with my project management team member to find solutions to a problem, which satisfy our expectations.							
6	I usually avoid open discussions of my differences with my project management team members.							
7	I try to find a middle course to resolve a difficult situation.							
8	I use my influence to get my ideas accepted.							
9	I would not admit I was wrong, instead I insist I was right.							
10	I usually admit the wishes of my project management team members.							
11	I give in to the wishes of my project management team members.							
12	I exchange an open conversation with my project management team members to solve a problem together.							

13	I usually allow concessions to my project management team members.							
14	I usually propose a middle ground for breaking deal locks.							
15	I negotiate with my project management team members so that a compromise can be reached.							
16	I try to stay away from disagreement with my project management team members.							
17	I avoid an encounter with my project management team members.							
18	I usually try to make a decision in my favor.							
19	I often go along with the suggestions of my project management team members.							
20	I use " Give and Take" so that a compromise can be made.							
21	I am generally firm in pursuing my side of the issue.							
22	I try to bring all our concerns out in the open so that the issue can be resolved in the best possible way.							
23	I collaborate with my project management team members to come up with the decisions acceptable to us.							
24	I try to satisfy the expectations of my project management team members.							
25	I try to avoid unpleasant exchanges with my project management team members							
26	I try to work with my project management team members for a proper understanding of a problem.							

SECTION D: Since you, as a project manager, took over, your team has been able to:

1 = strongly disagree, 2 = Slightly disagree, 3= Disagree, 4 = Neither Agree nor Disagree, 5 = Agree, 6 = Slightly Agree, 7 = Strongly Agree.

No.	Statements	1	2	3	4	5	6	7
1	Accomplish the prime assigned tasks by high-level management.							
2	Achieve the department's committed goals and objectives.							
3	Create greater cohesiveness among subordinates.							
4	Reduce employee turnover rate.							
5	Reduce possible resistance by followers on leader's request.							
6	Create sense of esprit de corps (Esprit de Corps), loyalty, and devotion uniting the members of a group.							
7	Generate profits for the company.							
8	Provide personal growth (skills, training, and promotion) to the members.							
9	Improve group cooperation.							
10	Improve morale of members.							
11	Increase overall contribution to the company.							
12	Gain respect of other departments.							
13	Be better prepared to face future challenges.							

Thank you for yours help