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IMPACT OF PERSONALITY TRAITS OF PROJECT MANAGER ON PROJECT SUCCESS

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ABSTRACT

The purpose of this research is to determine whether there exists an association between the personality traits of project manager and project success regarding timely completion of the projects. The research is explanatory in nature, and deductive approach was adopted, whereby hypotheses were developed after an in-depth review of relevant literature. The primary, quantitative data were collected from 85 Certified Project Managers of the Project Management Institute (PMI), with the help of questionnaire adopted from John, Donahue, and Kentle (1991). The five personality traits, Openness to Experience; Conscientiousness; Extraversion; Agreeableness; and Neuroticism were taken as independent variables. Hypotheses were formulated and relationship of each hypothesis was tested by using the Chi-Square test of association. Findings of the research indicate that there exists a significant relationship between three independent variables, i.e., Extraversion, Neuroticism, and Openness to experience, with project success regarding timely completion. However, no significant relationship was found between the two independent variables, i.e., Agreeableness and Conscientiousness with project success. The research findings would help the management in realizing the role of personality traits of project managers in the successful completion of the projects.

Keywords: *Personality Traits, Extraversion, Neuroticism, Openness to Experience, Agreeableness, Project success.*

INTRODUCTION

Organizations and individuals in the new millennium have a new perspective on project management (Kerzner & Kerzner, 2017) and the organizations have shifted from hierarchical structures to cross-functional team structures (Young-Hyman, 2017). The project management is becoming the focus of attention for organizations seeking to gain a competitive advantage in the relevant industry. Project managers are responsible for managing their projects; which is termed as a short-term

activity with a distinct start and end date and intended to create a service, product, or deliverable (Archibald, 2003). Project Managers are answerable for the project objectives and is involved in planning, defining scope, activities planning & sequencing, resource planning & handling, time estimation, cost estimation, risk analysis, quality control, and handling documentation. As per Lock (2017), the project manager's work includes planning, cost, control and quality of the project. The project manager undertakes immense pressure both from internal and external sources while making decisions for successful completion of the project. The personality traits of the project managers play a vital role in handling these massive pressures and making the right decisions at the right time (Munns & Bjeirmi, 1996). The project management leadership style has an impact on the project deliverables (Müller & Turner, 2007). Although managers and project managers share many of the qualities, there also persist many differences between general management and project management (Heagney, 2016). Project managers are proficient at resolving the day to day technical challenges and problems. The manner and methods by which a project management team manages the combination of cost, scope, and schedule within the variant political, social and technical environment can mean the difference between a failed project and a successful project (Hickson, 2015; Schmieder-Ramirez & Mallette, 2015). Sometimes a project manager stumbles while managing in a specific environment and soft skill areas of management (Mersino, 2013). The project management organization, project management team, and key stakeholders share responsibility for project success or failure. The management, project management team, and stakeholders share objectives, but each has a different underlying motivational drive for the successful conclusion of a project. These drivers are sometimes in a conflict which further lead to cost overruns, schedule delays, work stoppages, or complete project failures (Williams, 2011).

For this research, the Iron Triangle, i.e. time, cost and quality (Atkinson, 1999) has been considered as the basis of the project success. Since time is the most critical aspect of any project (McCOY, 1986), the project success was restricted to only to one factor, i.e. time.

PROBLEM STATEMENT

Every organization wants to see its projects completed within allocated time. It is the responsibility of the project manager to ensure project completion as per the requirements, according to the timeline and within budget. Organizational projects continue to fail at a rate of 60% to 80%

per year (LeBlanc, 2008), despite the vast amount of available project management literature, project management education, and project management trainings. An essential element to project success is selecting the right project manager to take charge of the task (Müller & Turner, 2006). The problems occur when organizational leaders assign project managers to projects and do not consider the type of personality of the project manager; often leading to project failure (Kerzner & Kerzner, 2017; Müller & Turner, 2007). Projects sometimes continue to fail even after competent project managers with extensive knowledge and skills are assigned the task (Crawford, 2006). However, one of the remedy for successful projects is managers personality testing. Personality testing can assist organizational leaders in selecting project managers and assigning the right manager to the right project (Cohen, Ornoy, & Keren, 2013). Through this study, an effort was made to identify the association between the successful project undertaken by the project manager and his personality traits. The project success regarding timely completion was evaluated on the most recent last three projects completed by each project manager. The personality traits were evaluated by using big five personality traits model by Goldberg (1993).

RESEARCH OBJECTIVES

Following research objectives were set for this study

- To understand the association between project success (timely completion) and manager's personality traits.
- To examine varying association of different personality traits on project success.
- To propose the organizations, measures to enhance the impact of personality traits on project success.

LITERATURE REVIEW

Project Success

Projects have been in existence since ancient times. The evidence of the same is the Giza Pyramids, the Parthenon, Taj Mahal, the Great Wall of China, and many other structured models in the world (Seymour, & Hussein, 2014). For quite a long time, individuals have overseen and finished gigantically complicated activities, such as the Great Wall of China & the Pyramids of Egypt (Frame, 1994). Since 1959, Project management

was shaped into a discipline that focuses on sequencing, costing, and resource utilization (Crawford, 2005).

The Project Management Institute (PMI), is an international organization, formed in 1969 to advance project management as a discipline and respected profession (Henrie & Sousa-Poza, 2005). The PMI authorized book (PMBOK) describes the project as, it has two characteristics, a temporary endeavor and a unique product/services/result (PMI, 2008a). The temporary endeavor does not refer to the duration of the project but directs that the project has a fixed start and termination (Kerzner,2006). The project usually finishes when the project purposes have either been attained or terminated because its objective cannot be met or where the purpose of the project is feasible (Kerzner, 2004). At a minimum, all projects need to have well-defined objectives and sufficient resources to carry out all the required tasks. Hence, the characteristics of a project are, a definite start and end; an explicit, predetermined goal; a sequence of composite or organized actions; and a restricted budget.

The project management is rapidly becoming a benchmark for conducting business (Larson & Gray, 2009). Approximately 40% of construction projects fail, and approximately 70% of information technology (IT) projects fail (Heagney, 2016; Al-Khouri, 2012; & Ferrell, 2010). However, there are no conclusive clarifications for such a high failure rate because project success or failure is dependent upon many factors (Mishra, Dangayach, & Mittal, 2011). The general problem of project failure is a concern because of the documented high rate of failure and the resulting high economic impact thereof (Shenhar & Dvir, 2007). In addition, the general problems that project managers invariably encounter are typically of complex nature attributed to unique parts and uncoordinated activities (Williams, 2011). Managing people effectively influences results of a project (Cooke-Davies, 2002). It is fast becoming accepted wisdom that it is the people who deliver projects, not processes or systems, and there has been a changing bias from tools and techniques, toward the social and behavioral aspects of management of projects (Leybourne, 2007). Project managers have a standard set of tools or processes to maneuver strategically through the political and technical environments of a typical project (Lock, 2017; Williams, 2011). Henri and Sousa-Poza (2005), indicate that a common theme to project success or failure is the people involved with the project. Some tools used to analyze projects include earned value management, critical path method, critical

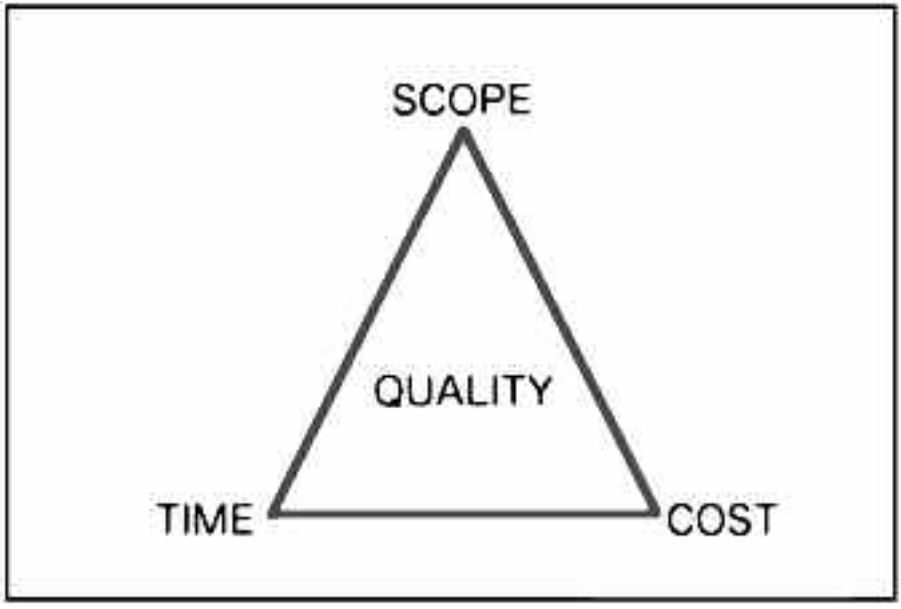
chain method, agile method and common sense gained through experiences. A devoted team may overcome most problems, but many factors can affect the project constraints, and even a strong project team cannot overcome them all (Mersino, 2013; Shenhar & Dvir, 2007). Many projects succumb to failure because the project management team does not properly manage the project constraints and the stakeholder expectations, that is, either the Scope, Schedule, Cost, Performance, or Quality, simultaneously or separately, because of the social and political environment within which they operate (Williams, 2011; Lewis, 2007). Project failure is defined as the inability of a project team to achieve an acceptable level of completion compliance by meeting project requirements as agreed by the project stakeholders (Toader, Brad, Adamov, Marin, & Moisa, 2010). An example of project success is a project that delivers predetermined values to stakeholders (Williams, 2011; Shenhar & Dvir, 2007). In short, project management teams led by project manager encounter many challenges or factors that affect policy, procedures, politics, personnel, performance, timing, cost, planning, and quality. Each decision can cause schedule delay, create cost overruns, and change the scope of the project (Lewis, 2007).

The Iron Triangle: Scope, Time & Cost

Critical factors are the key issues that a project manager and team must manage and control on a day-to-day basis to ensure project success (Cleden, 2017; Divakar & Subramanian, 2009). Unpredictably, some critical issues go wrong regardless of how well managed the plan is, for controlling scope, cost, schedule, and performance (Kerzner, 2006). If mishandled, critical factors can lead to project failure (Williams, 2011). Anything of value has a cost; resources; time; and material have value, and in turn, have cost. The cost must be accurate and specific from the beginning of a project (Mulcahy, 2011). The scope of a project's work must be a clear and specifically state of what is agreed by the key stakeholders (Mulcahy, 2011). Scope expressly defines the purpose, attributes, and functions of a project. The scope is a set of well-defined requirements that define the project's criteria for success. The scope of a project must be clear, well defined, and formally approved (Mulcahy, 2011). The process for developing a schedule is to deconstruct the scope and analyze it down to its lowest level, task or activity, of detail (Oren, 2009). The schedule and cost estimate form the foundation for future cost management processes (PMI, 2008a). Closely associated with the triple constraints are performance and quality. The triple constraints, performance, and quality are typically referred to as project

constraints (Williams, 2011). The project constraints affect each other in a fashion like the triple constraints (Heagney, 2016; Oren, 2009; Lewis, 2007). Changing a constraint will cause a proportional change to the other constraints. For this reason, project managers employ standard business processes to manage the constraints (Evensmo & Karlsen, 2005). Typically, these constraints are scope, cost, and schedule. Further, scope, time, and cost are collectively known as the triple constraints (Oren, 2009). Project managers should control the proportional relationships between the triple constraints (PMI, 2008b). Figure 1. represents the proportional relationships between the triple constraints.

Figure 1. Triple Constraints



Source: Atkinson, 1999

The success of a project is affected when the project sponsor or a key stakeholder, insists that the project may finish by a definite time, within a particular budget, or within a defined scope while achieving specific performance and quality expectations (Mossalam & Arafa, 2016). The resulting proportional change to one or the other constraints often comes as a revelation to the project sponsor or key stakeholder (Williams, 2011; Lewis, 2007).

Project Management Team

The project management team concept is most often used in engineering and construction efforts, but recently other industries such as, IT, petroleum, and finance are also adopting the project management concept. A project

management organization may observe multiple related or unrelated projects or programs (Kerzner, 2006). A program is a group of projects associated in a way to meet strategic requirements or for management control of related projects (Cleden, 2017; Ferrell, 2010). Although managers and project managers share many of the qualities, there are also many differences between general management and project management (Heagney, 2016). General management deals with ongoing concerns without a definitive schedule, cost, or scope (Williams, 2011; PMI, 2008b). In contrast, project management deals with a well-defined scope, schedule, and cost (Cleden, 2017; Williams, 2011; PMI, 2008b). The project management organization, project management team, and key stakeholders share the responsibility of project failure or success. The project management organization, project management team, and stakeholders also share objectives, but each has different underlying motivational drivers for the successful conclusion of a project (Williams, 2011; Kerzner, 2004). The drivers are sometimes in conflict, and this conflict can lead to cost overruns, schedule delays, work stoppages, or complete project failure.

The Role of Personality in Project Managers Selection

Müller and Turner (2006), found that the project management literature focused more on the project management process than on the people and have disregarded competence, leadership styles, and the personalities of project managers as potential success factors. Project management literature written between the 1980s and 1990s focused on stakeholders, planning, staff development, organizational structures, customers, senior management, and environments as project success factors. Project success factors in the early 2000s were on-time delivery, budget, and project management. Müller and Turner (2006), conducted a quantitative and qualitative study about the correlation between a project manager's leadership style and project type and found that the project manager's leadership style can influence the projects' outcome and that different project types require different leadership styles. Multiple combinations of competencies defined leadership styles (Turner, 1993). Driskell, Goodwin, Salas, and O'Shea (2006), found that small correlation exists between team characteristics and the competencies of project managers.

Project managers have a substantial impact on the outcomes of project, which has led to an increase in understanding of project management competencies (Crawford, 2005). The Project management Institute, (PMI, 2008a), has created standards, training programs, and certification programs

in the hope of determining the competencies of project management. Crawford (2005), found that senior managers value the knowledge of project managers quite differently to how project managers value their own knowledge. He conducted quantitative and exploratory analysis research and found that no meaningful relationship existed between the project manager's performance and the standards for performance that are applied in the workplace. He further found that additional project management knowledge did not make a project manager more competent.

Personality

In English language, the word personality refers to the complex of all the attributes; behavioral, temperamental, emotional, and mental, that characterize a unique individual; whose different reaction reflect different personalities (Personality, n.d.). It refers to the individual differences in characteristic patterns of thinking, feeling and behaving. The study of personality focuses on two broad areas: one is understanding individual differences in his personality characteristics, such as sociability or irritability and the other is understanding how the various parts of a person come together as a whole (Williams, 2011). The benefits, state of mind, activities, and intelligence between any two individuals of the same stage of development are different, and this difference between these two individuals is known personality (Kasschau, 2000). The behavior is something which identifies a person and makes him different from the others (Organ & Lingl, 1995). Therefore, it may be concluded that Personality is the mixture of characteristics and exotic activities of the individual which may affect the actions, qualities, appearance, and conduct of the individual and to assess the individual's personality the traits play a significant role (Allport, 1937). In behavior sciences, big five is the most relevant model to judge an individual's personality (Goldberg, 2013). The five-factor model of personality provides a meaningful and generalizable taxonomy for studying individual differences (Shi , Lin, Wang, & Wang, 2009). In this research, the big five-model is used to define project manager self-determining behavior types. The big five model consists of five wide-ranging personality characteristics:

- Extraversion
- Agreeableness
- Conscientiousness
- Openness to Experience
- Neuroticism

The Big Five Personality Trait Model

Many personality theorists tried to find out the personality traits and its scale to measure the personality traits. However, all the strove were unsuccessful to create a general group to unify personality traits and its scales. (John & Srivastava, 1999). Each assessor has his own pet units and uses a pet battery of diagnostic devices (Allport, 1937). In the field of psychology, Klages (1926), is the pioneer of concept that the personality traits help to understand human personality. Later the significant development in the personality traits theory was made by Cattell during 1943-46, who planned a merged system of fifteen main and eight subordinate factors (Cattell, 1943). Further research work was done on the Cattell's identified scale by Fiske (1949), who developed a Five-factor solution which can be interpreted as the big five, to some extent. Tupes and Christal (1961), also, analyzed the Cattel's identified scale, and their decision was almost identical with Fiske Five factor solution. Norman (1969), used all the complex system of Cattle's variables, and then all the difference between these two theories was limited to only abbreviations (e.g., "I seldom think about the future"). Later Goldberg in 2013, categorized these traits as the big five personality traits. The same has widened new research horizons on the subject, and the Cattell's sixteen-factor system and the big-five model have been researched extensively by different researchers. It consists of five wide-ranging personality qualities which could capture personality differences. These five wide-ranging personality factors, i.e. Extraversion, Agreeableness, Conscientiousness, Openness to Experience and Neuroticism (John & Srivastava, 1999) which are further explained in the following paragraphs:

- **Extraversion**
  Barrick and Mount (1991), described that an extraversion personality includes characteristics such as social, outgoing, violent and energetic. They are motivated by admiration, public appreciation, position and authority (Costa & MacCrae, 1997). Extraversion is directly proportional to active commitment (Erdheim, Wang & Zickar, 2006). People who are thought to be extrovert, love to enjoy networking, interrelating, interdepending and are mostly dynamic and energetic. They are passionate and usually task oriented. They exhibit energy, confidence, loquacity, amiability and are sensitive. Barrick and Mount (1991). Erdheim, Wang, and Zickar, (2006); Watson and Clark, (1997), determined that the extraversion prove

out to be the central part of positive emotions. Consequently, it is expected that extraversion would be identified with predominance in a group. In contra to some uncommon discoveries, self-observers have been found to add to effective group execution (Bradley & Hebert, 1997). Project managers, high in Extraversion are more intelligent and have the penchant to accomplish their objectives through their groups (Peterson, Smith, Martorana, & Owens, 2003). Extraversion in this manner has been found to emphatically impact group execution (Li, Zhou, Zhao, Zhang, & Zhang, 2015). In project administration, Extraversion was found to have a positive relation with the performance but a negative relationship with the team development (Salaria & Jamil, 2015).

- **Agreeableness**

  Agreeableness consists of qualities such as flexibility, lenient, supportive, believing, good-natured and forbearing (Barrick & Mount, 1991). People who are agreeable, are supportive and respectful (Organ & Lingl, 1995). These people always give priority to other people interests upon their own interest (Barrick & Mount, 1991). The mutual help, principle of trust and quality of the relationship are the essence of the agreeableness (DeNeve & Cooper, 1998; Judge et al., 1999). The team building, team development, and unity prosper in a team whose managers are agreeable, they encourage the team to work together with a better understanding (Barrick, Stewart, Neubert & Mount, 1998). Agreeableness helps build up healthy work-environment (Halfhill et al., 2005). The agreeableness exhibits positive relation with the team performance (Neuman, Wagner, & Christiansen, 1999). As per (Barrick & Mount, 1991), people possessing these traits are mostly kind, lavish, noble, supportive and reliable. The motivation factors for agreeable people are need of recognition due to affiliation and association. Due to this motivation need they are always flexible and softhearted while handling their subordinates (Barrick & Mount, 1991). In other words, this affiliation and association encourages project manager behavior with his/her working atmosphere and align his personal values and goal with organizations, which helps in the development of emotional bonding with the organization which ends up in creation of a better working situation and firming the organizational commitment (Ilies, Fulmer, Spitzmuller, & Johnson, 2009).

- **Conscientiousness**
  Conscientiousness refers to comprehensive work contribution propensity, i.e., liking for rule-governed behavior that probably is a common characteristic of work in organizations than in other life domains (Organ & Lingl, 1995). It echoes commitment, reliability, vigilance, structure, accountability, and determination (Barrick & Mount, 1991). The Conscientiousness is directly proportional to job performance and job commitment (Hurtz & Donovan, 2000). Hochwarter, Perrewé, Ferris, and Guerico (1999), identified that conscientiousness leads to organizational commitment, job satisfaction, and job involvement. Conscious people are characterized as self-disciplined, reliable and work-oriented. Their objective is the success which is achieved by sticking to planned activities (Barrick & Mount, 1991).

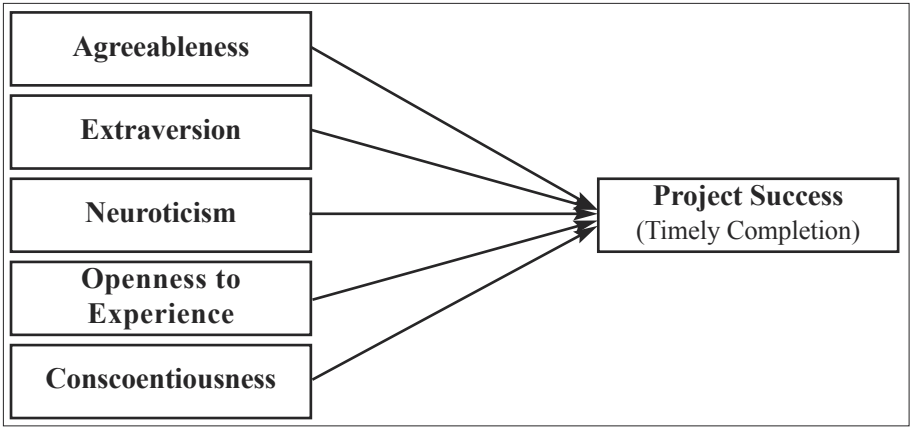
- **Openness to Experience**
  According to DeNeve and Cooper (1998), openness is a double-edged sword that predisposes an individual to feel both the good and the bad more intensely, leaving its directional influence on affective reactions. Openness pertains to being intellectual, original, inquiring, well-educated, unique, creatively penetrating and broad-minded (Barrick & Mount, 1991). The openness to experience is concerned to employee's commitment, task orientation and ultimately leads to organizational success (Srivastava, Chandra, & Shirish, 2015). Openness refers to a person's imagination, education, inquisitiveness, originality, and creativity (Barrick & Mount, 1991). Project manager processing this trait mostly complete projects within the stipulated time period and with efficiency (Lounsbury, Sundstrom, Loveland & Gibson, 2003). The healthy work environment allows project managers to exercise their skills, imaginations, and originality which in turn helps to develop useful commitment towards their project and company (Toader, 2011).

- **Neuroticism**
  Neuroticism refers to negative emotionalities, such as anxiety, depression, and stress (John & Srivastava, 1999). Neuroticism is one of the important and most researched personality characteristics (Costa & McCrae, 1997). It represents the negative side of the personality and includes characters such as anxiety, downheartedness, fury, apprehension, and uncertainty (Barrick &

Mount, 1991). Because of their internal fear and apprehension, neuroticized do not socialize and respond to people and mostly perceive the negative response from the others (Watson & Clark, 1997). They practice negative emotions such as anxiety, apprehension, misery and concern (Bozionelos, 2004). Managers with high Neuroticism display negative behavior which leads to a low performance by the project team (Deinert et al., 2015). Therefore, Project Manager with high neuroticism exhibits the negative effect in almost every situation. This attitude of project manager in return decreases the likelihood of project success.

THEORETICAL FRAMEWORK

Figure 2. Relationship between Dependent and Independent Variables.



Model constructed by the author(s)

RESEARCH HYPOTHESES

H1: Extraversion is significantly associated with project success in terms of timely completion of the project.

H2: Agreeableness is significantly associated with project success in terms of timely completion of the project.

H3: Conscientiousness is significantly associated with project success in terms of timely completion of the project.

H4: Neuroticism is inversely associated with project success in terms of timely completion of the project.

H5: Openness to experience is significantly associated with project success in terms of timely completion of the project.

RESEARCH METHODOLOGY

This research is explanatory in nature as it investigates single success characteristic to measure the overall success of a project. It is based on quantitative data and a deductive approach was adopted whereby the hypotheses were first developed, followed by the preparation of a questionnaire. For sample size and target population, Project Management Institute (PMI) was chosen, as it has a worldwide membership of more than half a million members (PMI, 2008a). There are 469,051 Project Management Professionals (PMP) certified worldwide members, of the Project Management Institute (PMI). Around 195 Project Managers are registered at PMI Karachi Chapter which was taken as the target population of the study. The sample size calculated before the study was 113 but to increase the response rate, a questionnaire was distributed among 120 respondents. Out of those, only 85 questionnaires were found complete and usable for analysis, the incomplete questionnaires were discarded and omitted from the study to avoid any response bias. Judgment Sampling technique was adopted as individuals of PMI with certain specified characteristics were targeted. For data collection and analysis, the Big Five personality trait questionnaire was adopted from John, Donahue and Kentle (1991), after approval. The questionnaire contains the demographic information of the respondents and information related to the independent variable under examination. Pearson's Chi-square test was used to examine the association of all IVs with DV, with the help of Statistical Package for Social Sciences (SPSS) software, version 23.

DATA ANALYSIS

Demographic Factors

Section A of the questionnaire represents the demographic view of the respondents with the question in relevance to gender, age, educational level, work experience, and designation.

Table 1. Respondents' Gender

Gender	Frequency	%
Male	70	80.5
Female	15	17.6
Total	85	100

Reliability Analysis

The Reliability refers to appropriateness and uniformity of the tool, measuring concept, and the same is free of biases and error (Sekaran &

Bougie, 2016). The reliability analysis has been conducted using Cronbach's Alpha analysis. Summary of results is presented in Table 2.

Table 2. Summary of Cronbach's Alpha Values

Variable	Cronbach's Alpha	N of Items
Extraversion	0.673	8
Agreeableness	0.598	9
Conscientiousness	0.781	9
Neuroticism	0.714	8
Openness to Experience	0.619	10

The values of Cronbach's Alpha (Table 2) obtained for different variables range from 0.598 to 0.781 which fulfill the requirements of reliability. Hence, items have internal consistency.

Test of Association

To test hypotheses, an association of all DVs was checked through Chi-Square test. Results are mentioned in Table 3.

Table 3. Chi-Square Values

Variable	Chi-Square	df	Asymp. Sig. (2-sided)
Extraversion	9.422[a]	3	.024
Agreeableness	3.738[a]	2	.154
Conscientiousness	3.814[a]	2	.149
Neuroticism	9.781[a]	3	.021
Openness to Experience	7.995[a]	2	.028

Chi-square test was used to test the association of each of the independent variables with a dependent variable. In case of first variable 'Extraversion', Chi-square value is (χ^2 (df=3) = 9.422 at p=0.024. Since p<0.05, the association is significant; hence alternate hypothesis is accepted. For the IV 'Agreeableness', χ^2 (df=2) = 3.78 at p=0.154). Since p>0.05, hence alternate hypothesis is rejected, indicating that Agreeableness is not significantly associated with Project success. In case of IV 'Conscientiousness', χ^2 (df=2) = 3.78 and p=0.149). As the value of p is more than 0.05, the association is not significant; hence the third hypothesis also gets rejected. Chi-square value for 'Neuroticism' at df=3 is 9.781[a] and value of p is 0.021 which is less than 0.05; hence hypothesis gets approved. In case of 'Openness to Experience,' the value of Chi-

Square is 7.995[a] (df=2), and the p-value is 0.028 which is less than 0.05. It indicates that association of this IV with project success is significant as well. This last hypothesis is also approved.

Table 4. Summary of Hypotheses Results

Variable	MHypothesis	Accepted/Rejected
Extraversion	Extraversion is significantly associated with Project success in terms of timely completion	Accepted
Agreeableness	Agreeableness is significantly associated with Project success in terms of timely completion	Rejected
Conscientiousness	Conscientiousness is significantly associated with Project success in terms of timely completion	Rejected
Neuroticism	Neuroticism is significantly associated with Project success in terms of timely completion	Accepted
Openness to Experience	Openness to experience is significantly associated with Project success in terms of timely completion	Accepted

The Pearson Chi-Square test results indicate that the association between extraversion and project success regarding timely completion is positive and significant, since (χ^2, (df=3) = 9.422; p=0.024). The results are supported by the research findings of Li, Zhou, Zhao, and Zhang, (2015); and Salaria and Jamil, (2015). Project manager high in extraversion are more intelligent and have the penchant to accomplish their objectives through their groups (Peterson, Smith, Martorana & Owens, 2003).

In case of 'Agreeableness,' the results {χ^2 (df=2) = 3.78 at p=0.154)} in Table 3 indicate that this IV is not significantly associated with project success in terms of timely completion. The results are related to the researches of Ilies, Fulmer, Spitzmuller, and Johnson (2009); Judge et al., (1999); DeNeve and Cooper, (1998); and which reflect that team's mutual help, the principle of trust and quality of the relationship are the essence of the agreeableness. Here in the context of this study, it is evident that project managers are not enjoying the trust of senior management and their relationship is not strong.

As per chi-square results in Table 3 {(χ^2 (df=2) = 3.78; p=0.149}, the association between conscientiousness and project success is not significant (p>0.05) although it is positive; it indicates that the trait of Conscientiousness of the project manager does not contribute towards the success of the project. The results are related to the findings of Hurtz and Donovan (2000), who asserted Conscientiousness as directly proportional to job commitment and project success but in the context of present study

results are not encouraging which demands another study to explore reasons for unaccepted results in Pakistani culture.

In case of Neuroticism, the results in Table 3 are quite encouraging; values {χ^2 (df=3) = 9.781; p=0.021} indicate that there exists a significant inverse association between these two variables. Hence, Neuroticism is inversely associated with Project success regarding timely completion of Project. Such managers mostly practice negative emotions such as, anxiety, apprehension, misery and concern which leads to a low performance by the project team (Deinert et al., 2015).

Openness to Experience is another crucial personality trait of a manager that has an essential role in successful completion of projects. As per result in Table 3, the values {χ^2 (df=2) = 7.995; p=0.018} indicate that this IV is significantly associated with Project success regarding timely completion. Results are supported by the researches by Srivastava, Chandra, and Shirish (2015); and Lounsbury, Sundstrom, Loveland, and Gibson, (2003), which mention that openness to experience is positively associated with project success.

CONCLUSION

This study investigated the association between five personality traits of project managers at Project Management Institute (PMI). For examining the role of the personality of Project Managers on successful completion of projects, five personality types of 'Big Five Model' were considered. Results have proved that out of the five traits only three traits Extraversion, Neuroticism, and Openness to experience have a significant association with project success regarding timely completion. Remaining two variables; Conscientiousness and Agreeableness have no significant association with project success. Since personality has great influence on the success of project managers, it is prudent for the top management or project sponsors to ensure appropriate personality of project leaders. It was rightly pointed out by Cooke-Davies (2002), that the projects are not delivered by the system or the process, but it is the team members who deliver projects. This study was an attempt to highlight this issue and identify the influence of personality types of project managers on successful completion of the project.

In order to help project sponsors to appoint project managers of appropriate personality, it is recommended to human resource departments

of organizations to include the personality trait test in their hiring process. The personnel's possessing the strong personality traits regarding Extraversion and Openness to experience, prove to be most appropriate candidates as project managers. Managers having Neuroticism should be rejected during hiring as their association with project success is negative. Moreover, workshops and training session may be held on a regular basis to improve the personality of managers further. On the other hand, project managers are recommended to keep evaluating themselves for these traits on a regular basis and take measures to develop essential personality traits.

FUTURE RESEARCH RECOMMENDATIONS

The research was conducted within the Project Management Institute (PMI) to capture actual project data, facts, and figures, and feedback from the project managers to measure the project managers' success criteria. Future scholars may endeavor to undertake similar research for other organizations which are undertaking different projects. A comparative study between local and foreign organizations may also be quite beneficial. This will eventually help in better understanding, as to why project managers having specific personality traits are successful in certain phases of the project, purely from the perspective of Pakistani culture.

REFERENCES

Al-Khouri, A. M. (2012). Projects management in reality: Lessons from government projects. *Business and Management Review*, *2*(4), 1-14.

Allport, G.W. (1937), Personality: *A Psychological Interpretation*. New York: Holt, Rinehart & Winston.

Archibald, R. D. (2003). *Managing high-technology programs and projects*. John Wiley & Sons.

Atkinson, R. (1999). Project management: cost, time and quality, two best guesses and a phenomenon, its time to accept other success criteria. *International journal of project management*, *17*(6), 337-342.

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta□analysis. *Personnel Psychology*, *44*(1), 1-26.

Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of applied psychology*, *83*(3), 377.

Bozionelos, N. (2004). The big five of personality and work involvement. *Journal of Managerial Psychology*, *19*(1), 69-81.

Bradley, J. H., & Hebert, F. J. (1997). The effect of personality type on team performance. *Journal of Management Development*, *16*(5), 337-353.

Cattell, R. B. (1943). The description of the personality. I. Foundations of trait measurement. *Psychological Review*, *50*(6), 559.

Cleden, D. (2017). *Managing project uncertainty*. Routledge.

Cohen, Y., Ornoy, H., & Keren, B. (2013). MBTI personality types of project managers and their success: A field survey. *Project Management Journal*, *44*(3), 78-87.

Cooke-Davies, T. (2002). The "real" success factors on projects. *International journal of project management*, *20*(3), 185-190.

Costa Jr, P. T., & McCrae, R. R. (1997). Stability and change in personality assessment: the revised NEO Personality Inventory in the year 2000. *Journal of personality assessment*, *68*(1), 86-94.

Crawford, J. K. (2006). Why project managers fail—and how to help them succeed! Paper presented at PMI® Global Congress 2006—North America, Seattle, WA. Newtown Square, PA: Project Management Institute.

Crawford, L. (2005). Senior management perceptions of project management competence. *International journal of project management*, *23*(1), 7-16.

Deinert, A., Homan, A. C., Boer, D., Voelpel, S. C., & Gutermann, D. (2015). Transformational leadership sub-dimensions and their link to leaders' personality and performance. *The Leadership Quarterly*, *26*(6), 1095-1120.

DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, *124*(2), 197.

Divakar, K., & Subramanian, K. (2009). Critical success factors in the real-time monitoring of construction projects. *Research Journal of Applied Sciences, Engineering, and Technology*, *1*(2), 35-39.

Erdheim, J., Wang, M., & Zickar, M. J. (2006). Linking the Big Five personality constructs to organizational commitment. *Personality and individual differences*, *41*(5), 959-970.

Evensmo, J., & Karlsen, J. T. (2005). Earned Value: The Hammer Without Nails?. *AACE International Transactions*, CSC.12.1-12.7.

Ferrell, G. (2010). The five pillars of project management infrastructure–An interview with Glenn Ferrell. *Journal of Digital Asset Management*, *6*(2), 83-96.

Fiske, D. W. (1949). The consistency of the factorial structures of personality ratings from different sources. *The Journal of Abnormal and Social Psychology*, *44*(3), 329.

Frame, J. D. (1994). The new project management: Corporate reengineering and other business realities.

Goldberg, L. R. (2013). An Alternative "Description of Personality": The Big-Five Factor Structure. *Personality and Personality*

Disorders: The Science of Mental Health, *7*, 34.

Goldberg, L. R. (1993). 'The structure of phenotypic personality traits": Author's reactions to the six comments.

Halfhill, T., Sundstrom, E., Lahner, J., Calderone, W., & Nielsen, T. M. (2005). Group personality composition and group effectiveness: An integrative review of empirical research. *Small group research*, *36*(1), 83-105.

Heagney, J. (2016). *Fundamentals of project management*. AMACOM Div. New York, NY: American Management Association.

Henrie, M. E., & Sousa-Posa, A. (2005). Project management: A cultural literary review. Project Management Institute, 36 (2), 5–14.

Hickson, R. C. (2015). *Project managers' perceptions of the primary factors contributing to success or failure of projects: A qualitative phenomenological study* (Doctoral dissertation, University of Phoenix).

Hochwarter, W. A., Perrewé, P. L., Ferris, G. R., & Guercio, R. (1999). Commitment as an antidote to the tension and turnover consequences of organizational politics. *Journal of Vocational Behavior*, *55*(3), 277-297.

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of applied psychology*, *85*(6), 869.

Ilies, R., Fulmer, I. S., Spitzmuller, M., & Johnson, M. D. (2009). Personality and citizenship behavior: the mediating role of job satisfaction. *Journal of Applied Psychology*, *94*(4), 945.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The big five inventory–versions 4a and 54.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, *2*(1999), 102-138.

Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career

success across the lifespan. *Personnel Psychology*, *52*(3), 621-652.

Kasschau, R.A. (2000), Glencoe Understanding Psychology. Missouri: Glencoe Partners.

Kerzner, H., & Kerzner, H. R. (2017). *Project Management: A Systems Approach to Planning, Scheduling, And Controlling*. John Wiley & Sons.

Kerzner, H. (2006). *Project management: A systems approach to planning, scheduling, and controlling* (9th ed.). Hoboken, NJ: John-Wiley & Sons.

Kerzner, H. (2004). *Advanced project management: Best practices for implementation*. John Wiley & Sons.

Klages, K. H. (1926). Central content area Metrical attributes and the physiology of hardy varieties of winter wheat. *Agronomy Journal*, *18*(7), 529-566.

LeBlanc, D. C. (2008). *The relationship between information technology project manager personality type and project success* (Doctoral dissertation, University of Phoenix).

Lewis, J. P. (2007). *Fundamentals of project management*. New York, NY: American Management Association.

Leybourne, S. A. (2007). The changing bias of project management research: A consideration of the literature and an application of extant theory. *Project Management Quarterly*, *38*(1), 61.

Li, X., Zhou, M., Zhao, N., Zhang, S., & Zhang, J. (2015). Collective□efficacy as a mediator of the relationship of leaders' personality traits and team performance: A cross level analysis. *International Journal of Psychology*, *50*(3), 223-231.

Lock, D. (2017). *The essentials of project management*. Routledge.

Lounsbury, J. W., Sundstrom, E., Loveland, J. M., & Gibson, L. W. (2003). Intelligence, "Big Five" personality traits, and work drive as predictors of the course grade. *Personality and individual differences*, *35*(6), 1231-1239.

McCOY, F. A. (1986, September). Measuring success: Establishing and

maintaining a baseline. In *PMI Annual Seminar & Symposium, Montreal*.

Mishra, P., Dangayach, G. S., & Mittal, M. L. (2011). An empirical study on identification of critical success factors in project-based organizations. *Global Business and Management Research: An International Journal*, *3*(3/4), 356-368.

Mersino, A. (2013). *Emotional intelligence for project managers: The people skills you need to achieve outstanding results*. AMACOM Div American Mgmt Assn.

Mossalam, A., & Arafa, M. (2016). The role of project manager in benefits realization management as a project constraint/driver. *HBRC Journal*, *12*(3), 305-315.

Müller, R., & Turner, R. (2007). The influence of project managers on project success criteria and project success by type of project. *European management journal*, *25*(4), 298-309.

Müller, R., & Turner, R. (2006, December). Choosing appropriate project managers: Matching their leadership style to the type of project. Project Management Institute.

Munns, A. K., & Bjeirmi, B. F. (1996). The role of project management in achieving project success. *International journal of project management*, *14*(2), 81-87.

Mulcahy, R. (2011). *PMP Exam Prep: Rita's Course in a Book for Passing the PMP Exam*. RMC Publications, Inc.

Neuman, G. A., Wagner, S. H., & Christiansen, N. D. (1999). The relationship between work-team personality composition and the job performance of teams. *Group & Organization Management*, *24*(1), 28-45.

Norman, D. A. (1969). Memory and attention: An introduction to human information processing.

Oren, R. A. (2009). Contributory success factors for projects with the project management profession: A quantitative analysis (Doctoral dissertation, Capella University). *Available from ProQuest*

Dissertations and Theses database. (UMI No. 3368756).

Organ, D. W., & Lingl, A. (1995). Personality, satisfaction, and organizational citizenship behavior. *The journal of social psychology*, *135*(3), 339-350.

Peterson, R. S., Smith, D. B., Martorana, P. V., & Owens, P. D. (2003). The impact of chief executive officer personality on top management team dynamics: one mechanism by which leadership affects organizational performance. *Journal of Applied Psychology*, *88*(5), 795.

Personality. (n.d.). Retrieved April 27, 2017, from Http://www.thefreedictionary.com/personality

Project Management Institute (PMI), 2008a. A Guide to the Project Management Body of Knowledge, 4th ed. Project Management Institute, Inc, Newtown Square, PA.

Project Management Institute (PMI), 2008b. The Standard for Portfolio Management – Second Edition, 2nd ed. Project Management Institute, Newtown Square, PA

Salaria, M. R., & Jamil, I. (2015). Impact of personality traits of the manager on the performance of the project. *"All papers published in the*, 17.

Schmieder-Ramirez, J., & Mallette, L. (2015). Using the SPELIT analysis technique for organizational transitions. *Education Applications & Developments Advances in Education and Educational Trends Series Edited by: Mafalda Carmo*, 290.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.

Seymour, T., & Hussein, S. (2014). The history of project management. *International Journal of Management & Information Systems (Online)*, *18*(4), 233.

Shenhar, A. J., & Dvir, D. (2007). *Reinventing project management: the diamond approach to successful growth and innovation*. Harvard Business Review Press.

Shi, J., Lin, H., Wang, L., & Wang, M. (2009). Linking the Big Five personality constructs to organizational justice. *Social Behavior and Personality: an international journal*, *37*(2), 209-222.

Srivastava, S. C., Chandra, S., & Shirish, A. (2015). Technostress creators and job outcomes: theorizing the moderating influence of personality traits. *Information Systems Journal*, *25*(4), 355-401.

Toader, C. S., Brad, I., Adamov, T. C., Marin, D., & Moisa, S. (2010). The main causes which lead to success or failure of a project. *Scientific Papers Animal Science and Biotechnologies*, *43*(2), 449-453.

Tupes, E. C. I., & Christal, R.E. (1961.). *Recurrent personality factors based on trait ratings*.

Turner, J. R. (1993). *The handbook of project-based management: improving the processes for achieving strategic objectives*. McGraw-Hill.

Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In *Handbook of personality psychology* (pp. 767-793).

Williams, T. C. (2011). *Rescue the problem project: A complete guide to identifying, preventing, and recovering from project failure*. AMACOM Division American Management Association.

Young-Hyman, T. (2017). Cooperating without co-laboring: How formal organizational power moderates cross-functional interaction in project teams. *Administrative Science Quarterly*, *62*(1), 179-214.