



An Open Access Journal Available Online

A Study of the Effect of Personality Characteristics on the Effectiveness of Construction Project Managers Performance

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Received: 25.03.2020 Accepted: 30.05.2020 Date of Publication: June, 2020

Abstract: The study is aimed at studying the effect of personal characteristics (extraversion) on the effectiveness of construction Project Managers with a view to determining whether personality has any effect on the Project Managers' performance. The study was carried out using two sets of questionnaires consisting of Eysenck Personality Questionnaire (EPQ) Adult Form and structured questionnaire to sample respondents' personality and measure their effectiveness respectively. The study revealed that personal characteristics is a feature of every construction project manage in the study. However, extraverted construction project managers constitute 64% of the respondents while introverted construction project managers constitute 36%. It was revealed that the three areas where the respondents are more effective in order of ranking are effectiveness of meeting clients' requirements in term of functionality of projects; effectiveness in terms of delivering the projects in terms of required quality standard; and effectiveness in terms of resolving conflict after occurrence before threatened project objectives which ranked first, second and third respectively. The study found out that there is a negative relationship between extraversion and effectiveness. The test of statistical significance using standard error and t-test showed no relationship between the variables. The t- value calculated (-0.297) is less than the t-tabulated (6.314)

held at 0.05 significant level. Also, the alpha value (0.769) is greater than the – p value (0.0). It is recommended that another research should be carried out to find out if they have impact on Construction Project Manager's effectiveness.

Keywords: Personal Characteristics, Extraversion, Introversion, Construction Project Managers.

1.0 Introduction

A typical project can be described as a temporary endeavour undertaken in order to achieve a particular objective (PMI 2000). Ogunlana, Siddiqui, Yisa, Olomolaiye, (2002)describe construction projects as a strategic aspect of man civilisation. The rapid progress made in the field of technology in the last centuries gave to a number of complex rise construction projects. Due to diverse and complicated state of project system, Ogunlana et al (2002) picks project integration as one of the important functions of the project manager. Project integration defined as the system of bringing together project components such as tasks, subsystems and individuals to form a whole so as to meet project objectives.

In the process of carrying out project integration, Ogunlana et al (2002) noticed that Project Manager performs three tasks. The first task is the implementation of an operational scheduling and monitoring structure for the tasks that are involved in the project. Second, is the establishing and maintenance of internal and external communication within the project. Third, the Project Manager resolves in-house and outdoor skirmishes through project integration before they threaten the objectives of the project. Kezrner (1979) cited in Ogunlana et al (2002) likened him to a conflict

manager. The Professionals due to schedule of activities interact with many people on site including the extrovert, the recluse, the aggressor the achiever, the quiet, the passive who need different handling. Project Managers are individuals responsible for managing projects on behalf of clients right from inception to completion aimed at meeting clients' requirements so that the project will be completed time. within on authorised cost and to the required quality standards (PMI 2000). Project about managing Management is people. The code of Practice for Project Management for Construction and Development put it thus: it is about the problems of motivating the project team, middle management and the work force and of gaining their commitments.

Of all the resources at the Project Manager's disposal, people stand out as the most important. A firm can exploit new technology to have technological advantage which can be acquired by other firms to cancel the competitive advantage. Conway and Johnson (1992) describe leadership as directing of the actions of the individuals and groups towards the achievement of a common goal. Therefore, given that projects largely happen through and by the efforts of people, the definition given above accurately describes project a manager. The success of a project will unavoidably be determined by the project manager's type of leadership and influence over subordinates. The authors are of the opinion that a leader must be concern about tasks and human relationship. This is where personality or personal characteristics become relevant.

2.0 Behaviour Trait Structure

Robbins (1989) defines personality as the sum total of ways in which an individual reacts and interacts with others. Adebakin and Gbadamosi (1997) describe personality as the total behaviour of an individual particularly to those enduring and consistent aspects that cause us to resemble others in some ways and to be totally different and unique in other ways. However, Robbins (1989) made reference to a definition regarded as the most widely used produced by Gordon Allport more than 60 years ago which define personality as the dynamic organisation within individual of those psychophysical systems that determines his unique adjustment to his environment.

The basic structure of personality is world all over the corroborated by the findings of the study carried out by Yoon, Schmidt and Illies (2002). The study was on cross-cultural validity of the Five-Factor Model of personality among Korea Employees. A finding from the study proved that personality structure transcends cultural differences. Yoon et al. (2002) observed that the conclusions of this study are in line with these recent findings. Smith et al (2001) observed that advocators of the Model argue that personality qualities are classified according to various

criteria into layers with very specific (slight bandwith) qualities that can be classified into one of the widely used five broad dimensions. Dunn et al (1995) citing (Digman, 1990 and Goldberg 1990) revealed that researchers are in unison about the five-factor that can be used as a significant classification for persona characteristics. Elshaug and Metzer (2001) noticed the fact that researchers described the Five-Factor ideal as the best structure for evaluating the most comprehensive spheres of personality.

However, Benet-Martinez and John (1998) argued that the Big Five dimensions do not imply that personal differences can be limited to only five traits. Instead, the structure is a classification of persona at the broadest level with further division of each factor into sub-divisions.

3.0 The Big Five- Factor Model a. Neuroticism (Emotional Stability)

This is synonymous with negative affectivity which Robbins (1989) interprets to mean an individual's capability to withstand stress. Zellars and Perrewe (2001) view the factor as reflecting feelings of distress and nervousness. Barrick and Mount Study (1991) cited in Le Pine and Van Dyne work (2001) explains that folks who have low points in emotional disorder have strong feelings. They are not worried, dejected, fuming, humiliated, expressive, nervous or apprehensive. They are not emotional and are tolerating and pessimistic as their colleagues who are highly worried. Benet-Martinez and John (1998) describe neuroticism as a factor, which compares being high on emotion with a wide choice of adverse impacts

comprising grief. nervousness. petulance and uneasy pressure. Individuals who are high in emotional disorder appears to be tense and not friendly with co-workers. As a result, there is the possibility that those with high emotional disorder would not be submissive and would not be able to influenced others at work. Tellegen (1982) describes this category of people as moody when on duty, feel worried and not favourably disposed to work. High-Neuroticism as opined by Tellegen (1982) is beneficial because individuals in this bracket are often critical of themselves and their performance than their low neurotic counterparts. This make them improve on their performance and therefore become particularly proficient in work such as quality control that requires critical thinking and evaluation. They also exert a needed strong influence in group decision making by playing devil's advocate and pointing out the negative aspects of a proposed decision.

b. Agreeableness

Zellars and Perrewe (2001) explain this concept as a factor that can exhibit caring aspect personal the of characteristics such as selflessness. and emotional teamwork Robbins (1989) explains the factor in term of an individual's propensity to concede to others. The trait pictures the distinction between individuals who get along well with other people and those who do not. Barrick and Mount (1991) cited in Le Pine and Van Dyne (2001) is of the view that people who are conformable are generally viewed as nice, friendly, yielding, well-mannered, malleable,

innocent, decent nature and lenient. Le Pine and Van Dyne (2001) citing Digman study (1990) summarises that individuals who is not caring tend to be unconcern or selfish. Le Pine and Van Dyne (2001) whilst opines that individuals who are friendly appear to have a communal orientation and a desire to give out of concern for others' needs. Robbins (1989)describes highly agreeable people as cooperative, warm and trustworthy while Tellegen (1982)describes individuals who are low on agreeableness antagonistic, as unsympathetic, mistrustful. uncooperative and rude. Tellegen (1982) observes that jobs that demands aggressiveness, such as an excise man or a drill instructor fit folks with low of agreeableness. measure Furthermore, agreeable individuals who are team players and easy to get along will fit jobs that hinge on developing good relationship with people.

c. Conscientiousness

This is a concept Robbins (1989) describes as a measure of reliability and which Tellegen (1982) defines as the extent to which an individual is careful, scrupulous and preserving. Yoon a1 (2002)explain conscientiousness in terms of dutifulness. orderliness. selfdiscipline. It is a factor that describes socially prescribed impulse control that facilitates task and goal directed behaviour (Benet-Martinez John, 1998). Le Pine and Van Dyne (2001) whilst citing (Barrick and Mount 1991) observed that those who are high on conscientiousness are dependable, careful, thorough,

responsible, organised and planful. In the view of Le Pine and Van Dyne (2001), highly conscientious people tend to do what needs to be done to accomplish work because they are hardworking, achievement oriented and perseverant. Tellegen (1982) opines that individuals who score low on this trait may lack direction and self-discipline i.e. they are easily distracted. disorganized and unreliable. People who are very thorough in their work sacrifice a lot, responsible, organised, dependable Tellegen persistent. observed that this factor is imperative in many organisational situations and has been found to be a good indicator productivity of in numerous occupations in many organisations.

d. Openness to Experience

Smith et al (2001) explain openness as the proactive seeking of experience for Tellegen its own sake. (1982)describes the concept as the degree of creativity and risk taking of an individual. This is opposite of being narrow minded and vigilant. Robbins (1989) views the concept as a creature's range of interests and fascination with reality. It is a class of traits that deals with the degree to which a person is imaginative, curious, open minded and sensitive. Benet-Martinez and Karakitapoglu (2003) notes that the dimension describes the breadth, depth and complexity of an individual's mental and experimental life. Individuals who are open to experience according to Tellegen (1982) excel well in jobs that change frequently, require innovation, or involve considerable risks. For this trait to transform into creative and

innovative behaviour in organisations, barrier to innovation must be dismantled. Industrialists, who like taking risk most times commenced their own business as a result of not being able to express themselves in the large organisation that employed them and not being adequately motivated. Robbins (1989) is of the view that extremely open people are creative, curious and artistically sensitive. Those at the other end of the openness category are conventional and find comfort in the familiar.

e. Extraversion

Zellars and Perrewe (2001) categorise the factor as one of the affective personality scopes of which others include agreeableness neuroticism. Tellegen (1982) equates extraversion to positive affectivity and further described it as a persona feature that makes individual to be highly emotional and feels ecstatic specifically and generally. Robbins (1989) opine that the concept captures one's comfort level with relationship. Benet-Martinez and John (1998)explain the factor as that which summarises traits related to activity and energy; dominance, sociability, expressiveness and positive emotions. Iversion, Olekalns, and Erwin Study (1998) cited in Zellars and Perrewe (2001) observed that workers higher in positive affectivity (a component of extraversion) experience less burn out. Tellegen (1982) noted that extraverts people who are high extraversion scale) are outgoing, warm and friendly whilst loners with a low probability of experiencing positive emotional states and have low societal relations at work. Robbins (1989)

listed some of the qualities of extraverts as being outgoing, confident and companionable whilst introverts tend to be reticent, shy and inaudible. Le Pine and Van Dyne (2001) whilst reporting Barrick and Mount (1991) describe people who are extroverted as sociable. gregarious. assertive. talkative and active. Extraversion has to do with individual's strength and good emotion. These are signs that should stimulate constructive and supportive dealings with others in course of getting work done. Smith, Hanges and Dickson (2001) in their study on personality and response distortion write: extraversion reflects the quantity or intensity of social interactions, activity level, and need for stimulation, self-confidence and competition.

4.0 Effectiveness of Construction Project Managers

A project consists of unique sets of activities undertaken to achieve a particular objective (PMBOK 2000). Project Management is the deployment of skills, knowledge, techniques or methods to achieve the objective of the study. Construction

Project Managers oversee the process of achieving this objective. Therefore, effectiveness of Construction Project Managers literarily means the ability of the Construction Project Managers to produce the desired result. Liu and Walker (1998)argue that effectiveness of project management process under project managers could be judged relative to the outcome of the project. Included recently are aspects such as safety and environmental sustainability issues which is classified under the project goal of standard. Project Management techniques have also become acceptable in executing information system and tasks, therefore, more companies trained their Information System Project Managers in technical aspect of the job. Some behavioural skills are also needed by information system analysts according to some studies. The most comprehensive of these studies according to (James et al, 1998) based on extensive pilot (Green's, research was 1998) skills involving 18 behavioural explained below:

S/No	Behavioural Skills	Description			
1	Diplomacy	Ability to say 'no' without being crude			
2	Interviewing	Asking the correct questions to get right information			
3	Directing	Giving instruction to subordinates about what to do			
4	Patience	Continuous polishing of users requirement for outcome			
5	Assertiveness	Pursuing of one's course of action even if it is			
		unpopular			
6	Leadership	Using of carrot and stick approach			
7	Speaking	Explaining ideas to be digested by listeners (i.e. groups			
		and individual)			
8	Writing	Preparation of written documents that relay ideas to			
		target readers			
9	Listening	Giving attention and assimilate what is being said and			
		asking questions about what is not clear			

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10	Empathy	Understanding the feelings of others			
11	Sales	Encourage others to reason with you			
12	Politics	Understanding what spur individuals			
13	Managing	Achieving results by carrying out management			
		functions			
14	Training	Engaging in activities that lead to skill behaviour			
15	Co-operation	Working with people to get result, effective conflict			
		resolution			
16	Organisational	Having a general view of company objectives and			
	Communications	processes			
17	Nonverbal	Hammering on the message of others through some			
	communications	signs			
18	Sensitivity	Being conscious of the effects of design and change for			
		user community			

5.0 Relationship between Extraversion and Effectiveness

Zellars and Perrewe (2001) reporting a study carried out by John (1990) explain the reason why people who are high in extraversion are cheery, hopeful and active compared with their opposite who are quiet or reserved. The reason attributed to this is probably because they are more active. discussing Zellar Perewe study (2001), the second significant finding has relevance as relationship regards the between effectiveness and extraversion and introversion. Since extraverts sociable and the intensity of their activity level, there is the inherent tendencies for them to be involved in more interpersonal activities. them receive greater cooperation from co-workers.

Extraverts are also talkative and it was shown that they reported more conversation of all conversations of all content types. Possibly, these conversations according to the author provide a means for employees to reduce their tensed state and perceive their efforts to be rewarding. If this is

true, this reinforcement is the best reason why extrovert achieve a lot in their job. These are some professions where communication with others is an important part of the career. It was revealed that qualities such as being social, loquacious, selfcordial. confident and active contribute to achieving results for jobs of this nature. Muhammad, Sajid and Syed (2017) carried out a study on the influence of Project Managers' Character on Project Success in Non-Governmental Organisation. The study showed that extraversion. and agreeableness, openness experience have a positive impact on project success where transformational leadership carried out the role of intermediary. Conscientiousness personality factor had only an indirect role on success of project through leadership that bring about change. No association found was between neuroticism and project success. Ralf, Teresa and Bruna study focused on analysing the project managers' personal characteristics in connection with its effect on project performance. The outcome of the

study showed that skills, knowledge and attitude have a direct effect on project performance. Furthermore. personal characteristics does not affect directly performance indirectly affect attitudes. The findings also showed that having a certificate in project management does not directly influence project performance. certification However. has moderating impact on the connexion between project managers' skills and knowledge and project management performance

6.0 Methodology

The study focused on effect of personal characteristics (extraversion) on the effectiveness of construction project managers in Lagos State. In carrying out this study, two sets of questionnaires were administered on respondents to collected data. Lagos was chosen because it is a hub of construction activities. The first set of questionnaires consists of the Eysenck Personality Ouestionnaire (EPO) Adult Form which was used in collecting data personal on characteristics of Construction Project Managers. The second set questionnaire was the structured designed one used collect to information on the effectiveness of Construction Project Managers. EPQ comprises Adult Form Ninetv Ouestions designed to measure four aspects of personality coded as PENL.

- (a) P = Psychoticism, the level of suffering from mental illness
- (b) E = Extroversion Introversion, degree of concerned with the social and physical environment
- (c) N = Neuroticism, unreasonably anxious or afraid.

(d) L = Falsehood, truthfully is a degree of the way by which a client has not deviated from responding to other EPO questions.

In scoring each of the personality, separate scores are obtained for each of the above scales. For each item, a score of 1 point is given in the expected response. The following are the expected responses in the items for the scale of extraversion.

- 1. E
- (a) 1 point for each YES marked in items: 1,5,10,14,17,25,29,32,36,40,4 5,49,52,56,60,64,70,82,86
- (b) 1 point for each No marked in items 21, 42

The group of digits here represent the set of questions in the EPQ that relates to extraversion out of all the questions drawn out in the questionnaire.

structured questionnaire The collect designed to information relating to the effectiveness Construction Project Managers. The study cover objectives of the respondents' personal characteristics, effectiveness. effect of personal respondents' characteristics on effectiveness and the connexion amid character and effectiveness. The target of the questionnaire is to examine the relationship between personal characteristics and effectiveness of the respondents. EPQ (Adult Form) and questionnaire structured administered on Thirty-Three (33) consultants who has postgraduate degree in project management. There are three objectives in this study. Firstly, is the sampling of personal characteristics of the respondents. This is treated from responses in the EPQ (Adult Form) (see Table 9.1). Secondly is the measurement of the effectiveness of the project managers. This is addressed in the structured questionnaire in terms of delivery of projects on time, budget, quality

standard, meeting clients' satisfaction and meeting projects functionality. Thirdly is the association between the variables which is shown in the regression analysis.

7.0 Result and Discussion

Table 1: Personality Dimension Distribution

Personality Dimension	Frequency	Percentage		
Introvert	12	36		
Extrovert	21	64		
Total	33	100		

Analysis contained in Table 1 above revealed that extraverted Construction Project Managers with 64% of the total respondents are more than introverted Construction Project Managers with about 36% of the sampled respondents. The managers were classified either as an extrovert or an introvert based on the score they obtained in the Eysenck Personality Questionnaire administered on each one of them. The questionnaires were then scored following the instruction in the manual. The norm score is 13.32 for extraversion. A score higher than the norm indicates extraversion and a score lower than the norm indicates introversion. It is based on this procedure that the figures in the above table were derived.

Table 2: Effectiveness of Project Managers

Question on Effectiveness	Relative Weight Index	Ranking	
Meeting Budget	2.42	9 th	
Meeting Time Schedule	2.39	10 th	
Meeting Quality Standard	3.42	$2^{\rm nd}$	
Meeting Clients Satisfaction	3.24	5 th	
Limiting Accident rate	3.30	4 th	
Limiting of Design Variation	2.61	8 th	
Project Functionality	3.52	1 st	
Meeting Future Maintenance	3.09	6 th	
Stopping of Conflicts	2.91	7^{th}	
Resolution of Conflict	3.33	3 rd	

Result from Table 2 which was computed by ranking, having determine the effectiveness of Construction Project Managers using the Relative Weighted Index. The measurement of effectiveness was based on how often the respondent deliver projects within the specified

specified budget, time schedule, required quality standard, rate of meeting clients' satisfaction after delivering the projects, frequency of limiting accident rate to the barest minimum, limiting of design variation, meeting of clients' requirements in terms of functionality, future

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maintenance, rate of stopping conflicts before occurrence and resolution of conflict after occurrence. From the ranking, effectiveness of meeting clients' requirement in term functionality of projects was ranked effectiveness in terms first delivering the projects in terms of required quality standard was ranked second and effectiveness in terms of resolving conflict after occurrence before threatened project objectives was ranked third. Effectiveness in terms of limiting accident to the barest minimum, meeting clients' satisfaction after delivering of projects, fulfilling clients' requirements in terms of future maintenance, stopping of conflicts before occurrence, limiting of design variation, delivering of projects within the specified budget and delivering of projects within the specified time schedule were rated fourth, fifth, sixth, seventh, eighth, ninth and tenth respectively. Therefore, the dominant areas where the respondents were most effective are meeting clients' requirements in term of functionality of projects, delivering the projects in terms of required quality standard and resolving conflict after occurrence before affecting project objectives

Table 3: Relationship between Personality and Effectiveness

Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
Model		В	Std. Error	Beta		
1	(Constant)	31.081	2.479		12.539	.000
	EXTRAVERSION	051	.172	053	297	.769

a. Dependent Variable: EFFECTIVENESS

Y=u-0.051

The result above shows that there is a relationship extraversion and effectiveness. This implies that personality does any impact on the effectiveness of the respondents. The test of statistical significance using standard error and tshowed that there test relationship between the personality and effectiveness. This is evidence from the fact that the t-value calculated (-0.297) is less than the ttabulated (6.314) held at 0.05 significant level. Also the alpha value

(0.769) is greater than the p-value (0.0).

8.0 Conclusion and Recommendation

Findings for the study showed that personal characteristics is a feature of every Construction Project Managers i.e. each of the respondents is either an extrovert or introvert. Secondly that extraverted Construction Project Managers are more in number than introverted Construction Project Managers. Also, that the three areas

where the respondents are more effective in order of importance are effectiveness of meeting clients' requirement in term of functionality of projects, effectiveness in terms of delivering the projects in terms of required quality standard effectiveness in terms of resolving conflict after occurrence before they objectives threatened project respectively. Lastly, personality characteristics personality (i.e. dimension of extraversion does not any significant effect effectiveness of construction project managers. It further suggests that whether construction project managers are HIGH or LOW (i.e. are extraverted or introverted) does not make any meaningful difference in their effectiveness on site

In conclusion, the study recommends The Five-Factor-Model that universal symbolises a personal structure. It is further recommended that effect of another dimension of personality on effectiveness construction project managers should be researched on to determine their impact on effectiveness ofconstruction project managers.

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