EVALUATION OF LEADERSHIP STYLES FOR EFFECTIVE CONSTRUCTION PROJECT DELIVERY IN NIGERIA

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A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE

AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA) IN PROJECT MANAGEMENT TECHNOLOGY

FEBRUARY, 2023

CERTIFICATION

This is to certify that this work **'Evaluation of Leadership Styles for Effective Construction Project Delivery in Nigeria'** was carried out by **Odenigbo Uzodinma Ernest (20044449388)** in partial fulfilment for the award of the degree of Master of Business Administration (MBA) in Project Management Technology of the Department of Project Management Technology, Federal University of Technology Owerri.

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To God Almighty, eternal source of wisdom.

ACKNOWLEDGEMENTS

I am indebted to God for his purpose in my career. He remains all knowing, and all seeing.

I am grateful to my supervisor, Dr. K.A Okorocha for his particular interest in this research and appropriate critique at significant instances. His profound interest in contemporary research methods was brought to bear in providing guidance to my research methodology.

I would like to acknowledge the direction and support I received from the Head of Department, Prof. G.F. Okorafor. His timely and precise feedback ensured we had minimal but very productive reviews of my research work.

My gratitude also goes to project team members who contributed immensely by providing valuable contribution to the data which served as a resourceful source for the accomplishment of this study.

I am also grateful to the following: Dr. E.C Ubani, Dr. C.I Anyanwu, Dr. D.C. Nwachukwu, Prof. E.O.P Akpan and other lecturers in the department for their efforts and direction in pursuing my MBA programme.

My wife, Amarachi remains a huge inspiration and encouragement in every facet of my endeavours. We have continued to pull through with remarkable feats.

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ABSTRACT

Leadership has been identified as a key factor in project management. This study is therefore focused on an evaluation of leadership styles for effective delivery of construction projects in Nigeria. To achieve this objective, a quantitative research design was adopted for the study on a secondary data of forty (40) projects executed by four construction companies in Abuja spanning from 1999 to 2017. The study is anchored on visionary leadership, contingency, agency and stakeholder theories as the framework through which leadership styles were evaluated for effective construction projects delivery. One-way analysis of variance (ANOVA) and project earned values were adopted as statistical tools for the analysis of the data. The earned values of the projects were analysed to determine the respective contribution of the leadership styles to construction project delivery. The findings indicated that project managers for different construction projects adopted specific leadership styles with autocratic leadership being the prevalent leadership style employed by the project managers. Autocratic leadership style gave rise to high compliance from project team members. Application of appropriate leadership styles by project managers for different construction projects is recommended for effective project delivery. The study further provided a basis for project leadership as a construct in project management curriculum.

Keywords: Project Management, Leadership Style, Construction Project,

Project Delivery

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Despite the plethora of research and emphasis on effective construction project delivery, project managers continue to face many challenges related to leadership style, motivation, learning, and teamwork (Berg & Karlsen, 2007) impacting on project outcomes. Indeed, a review of existing literature shows that time and cost over-runs have become the norm rather than an exception (Jugdev & Muller 2005; Kibuchi, 2012). Consequently, there has been increased number of litigations, wastage of resources, negative reputation of clients and professionals involved in unsuccessful projects (Aibinu & Jagboro, 2002; Jugdev & Muller, 2005).

Within project management, project manager's role is recognized as a key determinant of project delivery (Pinto & Slevin, 1988). Several studies (Keller, 1992; Keegan & Den Hartog, 2004; Higgs & Dulewicz, 2004) have theorized and tested the link between project manager's leadership style and project delivery. For example, Keller (1992) found a link between project manager's transformational leadership style and project delivery while Higgs and Dulewicz (2004) established a preference for transactional leadership style for simple projects and transformational leadership style for complex projects. However, there are inconsistencies in the available literature on the choice of an appropriate leadership style that would result in high level of project delivery. For instance, although Keegan & Den Hartog (2004) had predicted transformational leadership style to be appropriate for project managers, they found no significant relationship.

Hauschildt, Gesche, & Medcof, (2000) reported that the success of a project depended more on human factors, such as project leadership, top management support, and project team, rather than on technical factors. They also found out that the human factors increased in importance as projects increased in complexity, risk,

and innovation. According to Hauschildt et al (2000), project manager's leadership ability has a direct correlation to project outcomes.

While leadership and leadership styles have been identified as critical factors in organizational performance, no consensus has been reached in the area of project delivery (Kissi, Dainty, & Tuuli, 2013; Muller & Turner, 2012; Yang, Huang & Wu, 2011). In addition, Turner and Muller (2005) found inadequate relationship between project manager's leadership style and project delivery.

One of the most significant trends in the world has been the increasing amount of project activities across different sectors and industries (Winter & Szczepanek, 2008). With the utility of a project being dependent upon successful completion, the search for ways of enhancing project delivery has been on for several years (Chan & Kumaraswamy, 1997; Zimmerer & Yasin, 1998; Assaf & Al-Hejji, 2006) which has led to identification of critical success factors in terms of cost, quality and time. Despite this, consistency in project delivery remains a universal challenge in the construction industry (Talukhaba, 1999; Assaf & Al-Hejji, 2006; Gichunge, 2000).

According to Yang, et al. (2011), project characteristics moderate the relationship between teamwork and project delivery, while Gowan & Mathieu (2005) found out that some project characteristics such as technical complexity and project size have no impact on project delivery. This contradicts emerging literature, which recognizes the need for project managers to adopt different project leadership styles based on project characteristics and environment (Crawford & Cooke-Davies, 2012; Muller & Turner, 2007.

One possible explanation to the non-conclusive results from the aforementioned empirical studies might be due to the methodological differences in the studies. In addition, some of the studies such as Yang, et al., (2011) looked at the issue of leadership in general but did not consider impact of specific leadership styles on project delivery.

From the foregoing, it is evident that even as the issue of leadership has been widely covered in management, little attention has been given to the study of managerial behaviour and leadership styles in construction projects. Consequently, the application of these leadership principles to the prevailing challenges confronting construction industry performance is viewed as a critical factor for effective project delivery. This study therefore examined leadership styles in selected construction projects with a view to exploring the frequency of practice and level of effectiveness of adopted leadership styles in the construction industry. The study also evaluated the extent to which project team members comply with adopted leadership styles by project managers for different construction projects.

1.2. Statement of the Problem

Many construction projects continue to fail despite the use of established project methods and techniques as the leadership competency required for successful projects has been found lacking. A project's success is, in part, contingent on effectively managing the constraints of time, costs, and performance expectations. In order to achieve this, it is essential that the project manager possesses and displays appropriate leadership skills.

In Nigeria, investments in construction projects are huge. According to Toor and Ogunlana (2010), the construction industry has a greater need for leadership given that construction projects are large, technically complex and involve a combination of specialized skills. This study recognized a problem with effective leadership in construction projects because there are evidences that project deficiencies such as cost and time overruns, poor work quality, technical defects, poor durability, as well as inadequate attention to safety, health and environmental issues have become prevalent in the industry.

Despite limited research in the area of project leadership, the extent to which leadership influences construction project delivery is not clear, nor is the style of leadership apparent. Although studies on project manager's leadership style and project delivery have been undertaken internationally, the area remains under-studied in Nigeria with most researches concentrating on identification of causes of cost and time over-runs. In addition, the combined influence of project manager's leadership style, project characteristics and project delivery have not been comprehensively addressed. Thus, the need for further research in the area of construction project delivery was identified. This research therefore evaluated leadership styles for effective construction project delivery focusing on selected projects.

1.3. Objectives of the Study

The aim of this study is to evaluate leadership styles for effective construction projects delivery, a study of selected projects. In order to achieve this, the following objectives were set out to determine:

i. Leadership styles adopted by project managers in construction projects
ii. Any relationship between leadership styles and construction project delivery
iii. Degree to which project team members adhere to leadership styles adopted by project managers.
iv. If the level of compliance by project team members to adopted leadership styles has an effect on project delivery

Research Questions

The following were the research questions:

i. What are the leadership styles adopted by project managers in construction projects?
ii. What is the prevalent leadership style in construction projects
iii. What is the relationship between leadership styles and project delivery?

iv. To what extent do project team members adhere to leadership styles adopted by project managers?

1.4. Research Hypotheses

The exploit in this study progresses from the propositions that there is no relationship between leadership style and construction project delivery, and that the respective leadership styles under review does not exert significant effect on project delivery in the construction companies under study. Hence, the following null hypotheses were used to test the research questions:

$H_0$1: Transactional leadership style has no significant contribution to construction project delivery

$H_0$2: Transformational leadership style has no significant contribution to construction project delivery.

$H_0$3: Democratic leadership style has no significant contribution to construction project delivery

$H_0$4: Autocratic leadership style has no significant contribution to construction project delivery

$H_0$5: Project team members' level of compliance to project managers' adopted leadership styles has no effect on project delivery.

1.5. Scope/Limitations of the Study

The scope of the study is four construction companies and projects undertaken from 1999 – 2017 with respect to 40 projects provided by the companies for which specific leadership styles were adopted by the project managers. The construction companies include Dantata & Sawoe Construction Company Limited, Setraco Nigeria Limited, Reynolds Construction Company Limited and Paul-B Nigeria Plc. These construction companies are known to have executed projects in Nigeria in the period under review; and given their consistency in the construction industry over a

period of almost two decades.

The nature of this study requiring case projects from the construction companies which is subject to the discretion of the companies, posed limitations to the study. Another significant constraint to the study is in terms of collection of data from the construction companies as they declined to provide additional useful data on project performance such as cost, environment and quality of finished projects.

1.6. Significance of the Study

The construction industry plays an important role in the social-economic development of the country. Thus, the results of this study will be useful to various stakeholders in the industry. For government, development partners, project managers, consultants, contractors and clients in the construction industry, the study provided perspectives on the relationship between project manager's leadership style, project characteristics and project delivery. Through this, project managers are expected to adopt appropriate leadership style that will enhance project delivery in the construction industry and ultimately a derivation of value, reduction in time and cost over-runs.

In relation to project management theory, the study findings provide new insight to the conflicting results found in the literature. Researchers and the academic can also leverage on the findings of the study to propose and implement curricular design that incorporates the right blend of technical and leadership skills necessary for successful project execution. With project management being an emerging and dynamic discipline, the findings of this study can stimulate further research in project leadership.

The outcome of this study on leadership styles could benefit project management practitioners by providing specific leadership styles that could be applied towards improving the current approaches to project management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Framework

This study is based on the visionary leadership theory, the contingency theory, stakeholder theory and the agency theory as the theoretical framework through which leadership styles were evaluated for effective construction projects delivery.

Project delivery is measured in terms of project completion time (Pinto & Slevin, 1988; Cookie-Davies, 2002; Dissanayaka & Kumaraswamy, 1999; Kaka & Price, 1991). In addition, (Bass 1985, 1990; Turner & Muller, 2005; Pieterse, van Knippenberg, Schippers, & Stam, 2010; Yang, et al 2011; Kissi, et al., 2013; Muller & Turner, 2012) opined that leadership styles were identified and operationalized into autocratic, democratic, transformational and transactional.

Based on visionary leadership theory (Kissi, et al., 2013; Muller & Turner, 2012; Tabassi & Babar, 2010; Prabhakar, 2005; Keegan & Den Hartog, 2004), were of the view that project manager's leadership style has an influence on project delivery. For instance, a project manager may make use of transformational leadership style in order to enhance ownership of the project objectives and hence completion of project on time. According to Yang, Huang & Wu, 2013), it was theorized that the relationship between project manager's leadership style and project delivery was not direct, but is intervened by the project environment. Yakhchali & Farsani, 2013; Muller & Turner, 2010; Gowan & Mathieu, 2005, summarized that the relationship between project manager's leadership style and project delivery was not moderated by environment.

2.1.1 Visionary Leadership Theory

The literature on leadership is vast and this has resulted in several definitions with Cole (1996) defining leadership as a dynamic process in which one individual

influences others to contribute to the achievement of the group tasks. Although there is no universal definition, one key aspect is that leadership is a process and hence time is needed for a leader to influence subordinates in the desired way. Leaders influence followers by communicating ideas, creating acceptance of the ideas, motivating them to support and implement the ideas. While leadership is part of a manager's job, leaders always have the ability to influence will but managers may not. Leaders influence followers differently and hence leader's exhibit a combination of traits, skills and behaviours, which have resulted in different schools of thought or different leadership styles (Turner & Muller, 2005; Higgs, 2003).

Over the past decade, there have been six schools of leadership theory namely the trait, behavioural, contingency, visionary, emotional and competency school (Turner & Muller, 2005). The trait theory was most prevalent up-to 1940 and the key idea behind the trait approach was that effective leaders have common characteristics and hence leaders are born and not made (Kirkpatrick & Locke, 1991; Turner & Muller, 2005). Based on this theory, Turner & Muller (2005) identified problem solving ability, results orientation, energy and initiative, self-confidence, perspective, communication and negotiating ability as the key qualities of an effective project manager. During 1940 - 1960, the behavioural school was dominant which in contrast to the trait approach assumed leaders can be made and that effective leaders embrace certain behaviour. In 1960 - 1970, the contingency approach was the most prevalent theory with the key concept being that leadership style should be dependent on the situation. The visionary/charismatic school, which identified transactional and transformation leadership styles arose from the study of successful business leaders during

1980-1990 period. From 1990, the emotional intelligence school has been prevalent and considers leader's emotional intelligence as being more critical than their intellectual capability. Lastly, in the late 1990s, the competency school emerged which postulates that certain key competencies make leaders effective. In addition,

the theory advocates for need of different competencies in dissimilar situations. Since competencies can be learnt, this theory assumes leaders can be made which is in sharp contrast to the trait's theory.

2.1.2 Resource Based View (RBV) Theory

The theoretical foundation of RBV dates back to 1950's Penrose's view of an organization as a pool of resources and articulation of the same by Wernerfelt in 1984 (Penrose, 1995; Wernerfelt, 1984). The RBV consider the resources of a firm as being fundamental determinants of competitive advantage and performance. Whereas resources can be categorized in different ways, for instance tangible and intangible, tangible resources facilitate execution of business process while the intangible resources are the ones that might result in competitive advantage by allowing organizations to incorporate unique and valuable practices (Ray, et al., 2004; Barney, 1991).

As noted by Barney (1991), RBV is based on two assumptions of resources being heterogeneously distributed across organizations and the non- transferability of productive resources from one organization to another without incurring cost. Thus, given the two assumptions, RBV holds that only an intangible resource that is valuable, rare, hard to imitate and without strategically equivalent substitutes is critical in sustaining a firm's competitiveness (Barney, 1991).

Within projects, RBV is critical in that project management practices are based on both tangible and intangible resources (DeFillippi & Arthur, 1998).

For instance, tangible resources within project management include the use of codified methodologies, templates, tools and techniques that are readily available across the discipline (Crawford & Cooke-Davies, 2012; Jugdev & Mathur, 2006). On the other hand, project management intangible resources include leadership, teamwork, knowledge-based assets, tacit knowledge, and unique human capital practices between project manager and project team members such as mentoring,

brainstorming and surveillance that might contribute towards competitive advantage (Hunt, 1997; Jugdev & Mathur, 2006). Thus, given leadership and teamwork are valuable, rare, and imperfectly imitable resources, it is expected that these resources should have an impact on project performance.

In terms of applicability, RBV is criticized due to lack of consensus in the uses of various definitional terms such as capabilities, assets, resources and competences. In addition, RBV is criticized based on whether it can be tested due to lack of methodology to measure intangible resources (Barney, et al., 2011).

2.1.3 Contingency Theory

The history of contingency theory can be traced back to the late 1950, in which Woodward (1958) argued that technologies determine differences in organizational features such as span of control, level of centralization of authority and formalization of rules and procedures. Thereafter, Burns and Stalker (1961) introduced the notion of mechanistic and organic organisations in which they proposed the use of organic organisations in turbulent environments. In addition, Lawrence and Lorsch (1967) investigated on how different rates of change can affect organizations' ability to cope. Although the theory was initially concerned with organization's structural issues, other aspects have been incorporated for instance Fiedler (1967) focused on leadership aspects while Doty and Delery (1996) have concentrated on human resource related issues.

The classical contingency theory holds that organizational effectiveness is dependent on its ability to adjust or adapt to the environment (Sauser, B.J., Reiley, R.J., Shenhar, A.J. (2009). When applied to leadership, contingency theory holds that there is no best way to lead in that leadership is dependent upon the internal and external situational factors. Fiedler (1967) noted the need for different leadership style based on three variables first, the relationship between team members and leader in terms of loyalty, trust and motivation. Second, the task structure in terms

of clarity and attainability of goals, and third, position power in terms of authority to give direction, evaluate team performance and reward/punish based on performance.

Within project management, contingency theory is used to identify the extent of fit or misfit between project characteristics and project management approach being adopted. Based on the theory, project managers must understand the uniqueness of the project they are leading and avoid the temptation that all projects are alike and hence can be managed in the same way. This view is supported by Payne and Turner (1999) who found high level of project performance when specific project management approaches are used based on project characteristics. In addition, PMI (2003) has documented the need for identification and application of unique and specific project management principles based on project types. Tyssen, A.K., Wald, A. & Spieth, P. (2013) and Engwall (2003) posit that leadership in projects is complicated by existence of loose authority on team members, temporary nature of the relationship between project team and project manager, uniqueness of tasks, and limited project duration. Arising from the contingency theory, project performance is dependent not only on the technical qualifications of the project manager but also on the characteristics of the project undertaken. Thus, based on the above, it is expected that project characteristics should moderate the relationship between project manager's leadership style and project performance.

2.2 Stakeholder Theory

Stakeholder theory can be traced back to 1984 when Freeman defined a stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives". Although it has origin in strategic management, Cleland (1986) introduced stakeholder thinking in project management with identification and recognition that projects have diverse stakeholders with their own objectives, interests and expectations which at times conflict with each other.

Stakeholders are so critical in projects that PMI defines project management as the process of adapting the specifications, plans and approaches to be in line with concerns and expectations of the various stakeholders (PMI, 2008). Thus, one of the key functions of a project manager is to manage project stakeholders' expectations and concerns as successful completion of the project is dependent not only on cost, time and quality, but also on stakeholder satisfaction (Bourne & Walker, 2005; Cleland, 1995).

Stakeholder theory provides a framework of categorizing and understanding stakeholders in order to strategically manage them and hence get support for the project. Within project management, a variety of ways of categorizing stakeholders exist with the most popular classification systems being based on the stakeholders' role in the project (for instance, sponsors, client, contractor, project team member, customers, supplier. Others are based on stakeholders' involvement and the nature of their relationship with the project (for example, internal or external), the nature of stakeholders' claim and position towards the project (for example, promote or oppose), and the degree to which stakeholders' behaviour can be anticipated.

Given the diverse needs of stakeholders at various stages of project life cycle, it is imperative that their stakes and roles in the whole project be determined during project conception. Based on the importance of the stakeholder in the project, appropriate management strategies must be designed to win their support in the project and hence facilitate attainment of project objectives in a timely and cost effective way. For instance, within projects, project teams are considered as key stakeholders due to their capacity to influence project performance. Arising from the stakeholder's theory, there is need for project managers to adopt appropriate leadership style and management strategies for both internal and external stakeholders as a way of enhancing project performance.

2.3 Agency Theory

The agency theory is concerned with the relationship between the principal and the agent, in which the principal delegates work to the agent, who then in turn performs the work on behalf of the principal. In the construction industry, the relationship between the project owner and the contractor creates a principal- agent relationship in which the principal (project owner) depends on the agent (contractor) to achieve the project objectives. However, within projects, the principal–agent relationship is complicated by the fact that the principal and the agent also delegate their duties to their respective project managers. This creates multiple relationships in which several participants with divergent interest are expected to work together to achieve project goal (Turner & Muller, 2004).

Several studies have identified communication as an important factor in project execution as it facilitates sharing of project information among project team members. In addition, communication facilitates teamwork, motivation and monitoring of project activities. However and according to Kariuki (2015), as pointed out by several authors (Turner & Muller, 2004; Ceric, 2011), poor communication is one of the leading project risks which can contribute to poor project performance. Further, due to project team members' self-interests, conflict of interest and inadequate communication, information asymmetry exists within projects.

Information asymmetry arises when one party within a project is more informed than the others (Schieg, 2008). Due to information asymmetry, projects experience three types of risks namely adverse selection, moral hazard and hold-up. Adverse selection problem occurs before the parties in the project signs a contract in that the project owner may not have all information about the contractor or consultant and hence there is risk in their selection, which might affect project performance. In addition, due to project team's self-interest and lack of guarantee that the selected contractor or consultant will mobilize their capabilities to execute the client's activities, moral hazard risk occurs.

Finally, hold-up problem occurs when one party in the contract behaves in an opportunistic manner to the detriment of the project (Chang & Ive, 2007). The consequence of these risks is poor project performance. To address principal– agent problem, project owners implement screening systems during hiring of key project team members such as consultants and contractors. In addition, during project execution, clients also implement monitoring systems as a way of reducing information asymmetry. However, this can result in an increase in agency costs. Thus, arising from the agency theory, there is need for project managers to adopt appropriate leadership style and management strategies that deals with project team members' `self-interests, conflict of interest, inadequate communication and information asymmetry as these would affect project performance.

For the purpose of this research, four leadership styles were examined namely: Transactional, Transformational, Democratic and Autocratic leadership styles.

2.4 Transactional Leadership

This study was partly based on the visionary theory in which there is transactional and transformational leadership developed by Bass (1985, 1990). Transactional leadership focuses on the exchanges that occur between leaders and followers (Bass 1985; 1990; 2000; 2008). These exchanges allow leaders to accomplish their performance objectives, complete required tasks, maintain the current organizational situation, motivate followers through contractual agreement, direct behaviour of followers toward achievement of established goals, emphasize extrinsic rewards, avoid unnecessary risks, and focus on improve organizational efficiency. In turn, transactional leadership allows followers to fulfil their own self-interest, minimize workplace anxiety, and concentrate on clear organizational objectives such as increased quality, customer service, reduced costs, and increased production (Sadeghi & Pihie, 2012).

Transactional leadership style emphasizes on contingency reward and management

by exception. Contingency reward emphasizes on the leader agreeing with followers on the goals, responsibilities, operating structure and reward to be received upon achievement of set performance targets (Bass & Avolio, 1994). On the other hand, management by exception may be categorized into two namely Management by Exception-Active (MBEA) and Management by Exception-Passive (MBEP). MBEA arises in cases where the leader actively monitors progress and initiates corrective action before things go wrong. In case of MBEP, the leader waits passively and only takes action when there are problems (Bass, 1985).

Today, researchers study transactional leadership within the continuum of the full range of leadership model (Bass & Riggio, 2006). Some researchers criticize transactional leadership.

2.4.1 Criticism of Transactional Leadership

Some researchers argued that transactional leadership practices lead followers to short-term relationships of exchange with the leader. These relationships tend toward shallow, temporary exchanges of gratification and often create resentments between the participants. Additionally, a number of scholars criticize transactional leadership theory because it utilizes a one-size-fits-all universal approach to leadership theory construction that disregards situational and contextual factors related organizational challenges (Beyer, 1999; Yukl, 1999; 2011; Yukl & Mahsud, 2010). Empirical support for transactional leadership typically includes both transactional and transformational behaviors (Gundersen, Hellesoy & Rader, 2012; Liu, Liu, & Zeng, 2011). Next, this manuscript reviews two recent articles featuring transactional leadership theory.

2.5 Transformational Leadership

Transformational leadership is defined as a leadership approach that causes change in individuals and social systems. In its ideal form, it creates valuable and positive change in the followers with the end goal of developing followers into leaders.

Enacted in its authentic form, transformational leadership enhances the motivation, morale and performance of followers through a variety of mechanisms. These include connecting the follower's sense of identity and self to the mission and the collective identity of the organization; being a role model for followers that inspires them; challenging followers to take greater ownership for their work, and understanding the strengths and weaknesses of followers, so the leader can align followers with tasks that optimize their performance.

In transformational leadership style, leaders motivate followers to achieve objectives by raising their level of awareness, motivation as well as addressing and modifying their values and self–esteem. According to Bass & Avolio (1994), transformation leadership involve four I's namely Idealized Influence (II), Inspirational Motivation (IM), Intellectual Stimulation (IS) and Individualized Consideration (IC). Idealized influence refers to the ability of the leader to exert influence by acting as a role model to the followers while IM refers to the ability of the leader to develop and articulate a compelling future vision as well as creating an image of success. On the other hand, IS arouses intelligence, rationality and focused problem solving by questioning assumptions, seeking differing perspectives and encouraging innovation and creativity. Individualized consideration emphasizes on the need for leaders to treat followers as individuals and not as just as members of a group.

Keegan & Den Hartog (2004) predicted that transformational leadership would be more appropriate for project managers. However, in their study, even though they found a preference for transformational leadership, they could find no significant link. Thus, across all projects, one dimension was not a significant determinant of success as a project manager. Geoghegan & Dulewicz (2008) found a relationship between leadership skills and the success of a project, although it cannot be neglected neither the maturity of the project itself (Andersen & Jessen, 2003) nor the technical expertise of the project manager (Turner & Müller, 2005), which

should be articulated with the human dimensions (Eskerod & Riis, 2009). Although the powers of the project manager, including leadership, are required by the stage of the project life cycle (Turner & Müller, 2005), the dimensions of emotional intelligence (Khan, Saeed & Sanaulla, 2011) seem positively related to transformational leadership. Rehman & Waheed (2012) also noted that emotional intelligence moderated the relationship between transformational leadership and decision – making styles, which they considered fundamental to the success of project management.

2.5.1 Criticism of Transformational Leadership

Empirical research supports the idea that transformational leadership positively influences follower and organizational performance (Diaz-Saenz, 2011). However, a number of scholars criticize transformational leadership style (Beyer, 1999; Hunt, 1999; Yukl, 1999; 2011). Yukl (1999) took transformational leadership to task and many of his criticisms retain their relevance today. He noted that the underlying mechanism of leader influence at work in transformational leadership was unclear and that little empirical work existed examining the effect of transformational leadership on work groups, teams, or organizations. He joined other authors and noted an overlap between the constructs of idealized influence and inspirational motivation (Hunt, 1999; Yukl, 1999). Yukl suggested that the theory lacked sufficient identification of the impact of situational and context variables on leadership effectiveness (1999; 2011).

2.6 Democratic Leadership

Democratic leaders provide guidance, empower subordinates to make the best use of their competencies and talents, and prioritize social aspects of group work (Maloş 2012 pp. 421-423). They also reward employees for commitment and prefer not to penalize mistakes but work on problems instead. Empowered employees feel more responsible for meeting goals (İnandi, Uzun, & Yeşil 2016, p. 194). In addition, the

democratic leader offers suggestions and reinforces member's ideas (Liphadzi, Aigbavboa & Thwala, 2015). The democratic style supports the teamwork method and always coaches and leads staff to achieve the organizational goals.

The democratic type of leader customarily consults his team members and considers their suggestions although the final decision lies with the leader (Dessler & Starke 2004). The pros and cons of using this participative leadership style include higher quality of work produced, although the quantity of work is decreased, and commitment to the goals as there is a sense of ownership and a valued feeling of being a part of the team (Dessler & Starke 2004). Democratic leaders involve employees in discussion on business prospects and consultations on emerging and foreseen problems. Consequently, employees are more committed to their work and willing to release creativity because of the confidence entrusted. The democratic approach stimulates quality assuring behaviours (Cunningham, Salomone, & Wielgus, 2015). Democratic leadership style is particularly recommended in case of innovative organizations or projects which require cooperation between various units of an organization (Mohiuddin 2017, pp. 26-27)

2.6.1 Criticism of Democratic Leadership

According to Jiang (2014), democratic leaders go through an elaborate decision finding process that involves several stakeholder of different organizational background and levels. As a result, democratic leadership behavior often leads to extreme delays in large projects because all team members get involved in every decision process of a project. Jiang (2014) therefore concluded that the more people are part of a project team, the longer it takes until a decision is made. Fiaz, Qin, Ikram, & Saqib, (2017) emphasized that democratic leadership usually results in extension of time required to complete projects. However, this can be balanced by the democratic leader developing highly-motivated, but smaller teams (Fiaz et al. 2017, p. 147).

2.7 Autocratic Leadership

Autocratic leaders are commonly referred to as authoritarian. They provide clear expectations for what needs to be done, when it should be done, and how it should be done. There is also a clear divide between the leader and followers. According to Liphadzi, et al. (2015), autocratic leadership sets agendas and determines the group's policies, assigns tasks to members, and makes decisions for the group without consulting subordinates. In the end, the leader takes responsibility for the group's progress, but accepts very few suggestions from the group. Rarely do the group members communicate with one another, but they communicate with the leader (Liphadzi, et al., 2015).

Autocratic leaders give their subordinates clear and short instructions on what to do and how to do it. This helps to perform tasks effectively, solve identified problems, and meet targets or deadlines, in particular when time is a critical factor (Sauer 2011; Cunningham, Salomone, Wielgus 2015, p. 34). Consequently, performance may increase on a short-run (İnandi, Uzun, Yeşil 2016, p. 194).

2.7.1. Criticism of Autocratic Leadership

The autocratic leadership style does not instill learning mentality, which is crucial to stimulate proactive attitudes among employees (Sauer 2011). A lack of consultation with subordinates may cause that opportunities are missed and risks are underestimated.

2.8 Factors influencing leadership styles

Many studies on industrialized nations and developing countries (Jannadi, 1997; Enshassi, Al-Hallaq & Mohammed 2006) showed that both business and project failures are common in construction. Several reasons are cited for these failures. In another study, Bjeirmi, (2007) noted that the UK construction industry has been the subject of ongoing criticism for its fragmentation and poor record on quality, waste, financial claims, safety and efficiency. They note that a major cause for this

criticism is inadequate communication throughout the construction process because inappropriate procurement approaches have been adopted. Moreover, Toor & Ogunlana (2008b) observed that the major problems that construction projects in Thailand typically face include an inadequate procurement system, inadequate resources, discrepancies between design and construction, inadequate project management practices, order variations, communication lapses, cultural issues and differences in the participant interests. In Malaysia, Abdul-Rahman (2007) found that the quality of management was unsatisfactory for contractors that undertake public design-and-build projects. The quality-related factors that contributed to this situation were budget constraints, time constraints, client complexity, poor communication and design variations. Hence, Davidson and Maguire (2003) found that the top ten reasons for failed construction firms in the US included the following: rapid growth, work in new geographic regions, an increase in the sizes of single jobs, new types of work, high employee turnover, inadequate capitalization, poor estimations, poor accounting systems and poor cash flow. In another vein, Pires (2007) highlighted the following common problems on construction projects in Portugal: frequent delays, cost overruns, insufficient quality and inadequate safety. These problems have reduced the industry's competitiveness. Their survey revealed the following reasons for such problems: design and client responsibilities, inadequate construction management and inadequate specific training.

According to Tannenbaum & Schmidt (1973) leadership style is influenced by four factors; the leader’s value system, confidence in subordinates, leadership inclinations and feelings of security in uncertain situations. Based on this premise, they depict leadership style as existing on a continuum; from a democratic or subordinate centered style to an authoritarian or leader centered style. In another study Songer, Chinowsky & Butler (2006) highlighted certain present and future leadership challenges to the construction industry and organizations. Hence, Toor & Ofori (2008b) catalogued current and emerging leadership challenges, including

challenges that are industry specific, general to businesses and in the operating environment. For example, certain surveys showed that respondents in the construction industry had low satisfaction with their leaders' ethics and authenticity (Toor & Ofori, 2007).

As shown in the above studies, much of the blame for the industry's poor delivery in most countries is often allocated to factors outside of the control of construction organizations and professionals. Certain authors blame economic cycles and the political environment (Enshassi, et al 2006). Even where the features and failings of the industry, as well as its practices and procedures, are highlighted, practitioners and certain researchers do not appreciate the importance of leadership in the construction industry.

2.9 Leadership Styles in Project Management

Within project management, researchers have studied the concept of leadership extensively (Berg & Karlsen, 2007; Dainty, Cheng & Moore, 2005; Gehring, 2007; Hyvari, 2006; Kezsbom, 1998; Kodjababian & Petty, 2007; Neuhauser, 2007; Schmid & Adams, 2008;; Turner & Muller, 2005). The researchers sought to highlight the importance of project leadership as a key aspect of project successes. Their findings suggested that more demanding market conditions required a stronger focus on leadership, knowledge, and skills to ensure project success. They also believed that successful project outcomes would require an increased emphasis on the organizational and human aspects of project management. Thus, leadership is a social influencing process in which the leader seeks active participation of the followers in the attainment of set goals. Within a project set up, it is recognized that the project manager must provide leadership in order to ensure effective planning, co-ordination and control of project activities through application of appropriate project management knowledge and systems. However, existing literature acknowledges that an effective project manager must not only be technically

qualified but must also possess the requisite soft skills such as leadership and people management, which are essential in their roles (Muzio, Fisher, Thomas & Peters, 2007).

As noted by Muzio, et al., (2007), 90-95 percent of project issues require soft skills such as leadership. Hebert (2002) who found that only 10 percent of project manager's role entails application of technical knowledge while 90 percent involves soft skill issues such as leadership and management has echoed similar sentiments. Extant literature also recognizes that during their interaction with followers, leaders exhibit a combination of traits, skills and behaviours, which results in different leadership styles.

According to Shore (2005), without appropriate leadership, the risk of project failure increases. Consequently, one stream of research that is gaining prominence is on the impact of project manager's leadership style on project delivery (Kendra & Taplan, 2004; Turner & Muller, 2005; Yang, et al., 2011). Existing literature, however shows that unlike in formal organizations, leadership in projects is complicated due to involvement of different experts from organizations with diverse philosophies and practices, limited and predefined duration, individual project characteristics, conflict of interest and existence of temporary management structures that are formed to facilitate project execution (Clarke, 2012; Tyssen, et al., 2013).

Hersey & Blanchard (1982) defined leadership style as a consistent pattern of behavior that a leader uses when working with and through people. Over the past decades, there have been six schools of leadership theories namely the trait, behavioural, contingency, visionary, emotional and competency school. Within the visionary school, there are transformational and transactional leadership styles developed further by Bass (1985, 1990). Pieterse, et al. (2010) defines transformational leadership as an approach to leading that changes followers,

making them to look beyond self-interest in favour of the group's objectives by modifying their morale, ideas and values. Thus, in transformational leadership style, leaders define and articulate need for change, create new vision, mobilize commitment and inspire followers to deliver extraordinary results. Transactional leadership style, on the other hand, is based on rewarding followers for meeting delivery targets and punishing them when they fail (Bass, 1990).

The interest in alternative leadership paradigms in the 1980s gave rise to different forms of leadership including transactional and transformation leadership (Tichy & Devanna, 1986), democratic leadership (Conger, Kanungo, & Menon, 2000) autocratic (Manz & Sims, 1989) or principle-centered leadership (Covey, 1992). These leadership models can be explained by the understanding of the pre-requisites of the resource-based strategy and human resource management model. Hence, (Giritli & Oraz, 2004) opined that different approaches to the subject have led to various classifications of leadership styles.

Leadership style is in general of two types; the first one is the employee- centered type, described as democratic or participative, and the second one is the task-centered type, described as autocratic or authoritarian (Giritli & Oraz, 2004). Different leadership systems emerged from literature. Leadership styles was classified by (Giritli & Oraz, 2004) into democratic (employee-centered) and autocratic (task-centered). Leadership styles identified by Halepota (2005) include laissez-faire, democratic, and autocratic. Furthermore, Chan & Chan (2005) adopted transformational and transactional leadership styles in a study.

In construction, leadership is even more essential and this has been established in many studies (Odusami, 2002; Long, Ogunlana, & Lan, 2004). Studies on leadership styles and their effectiveness in managing projects is quite relevant to construction industry because construction managers have to wear different hats at different circumstances. For instance, (Thamhain, 2003) highlighted the leader's

importance in creating a supportive work environment for the project participants. However, (Munns & Bjeirmi, 1996) emphasized that the success or failure of project management is highly dependent on the project leader. In (Chinyio & Vogwell, 2007) study, it was found that effective leadership of many stakeholders in a construction project could aid in harmonising their goals and preventing conflict. Despite this recognition that leadership is important at all levels of the construction industry, emphasis is placed on the technical aspects, as well as management and leadership receives inadequate attention (Skipper & Bell, 2006). Many authors suggest that researches on leadership in the construction industry are highly insufficient and this was supported by (Keegan & Den-Hartog, 2004); and (Chan & Chan, 2005).

In a review on leadership conducted by Toor & Ofori (2008b) in construction management literature, they provided a chronological account of the key developmental phases and leadership research in construction dating back to the 1980s. During the 1990s, leadership research in construction tended to focus on leadership style (Dulaimi and Langford, 1999), attributes and behaviours (Muir & Langford, 1994; Zimmerer & Yasin, 1998). In this decade, the trend in construction leadership studies has shifted toward transformational leadership (Chan & Chan, 2005), power issues (Liu & Fang, 2006), leader emotional intelligence, leadership development and cross-cultural issues (Toor & Ogunlana, 2008b). However, studies on leadership behaviours, traits and styles in construction are still common (Songer, et al., 2006).

Love (2007) opined that two leadership styles dominate the construction management literature and they are charismatic and transformational. To (Toor & Ofori, 2006), construction managers' leadership styles are more product- oriented than relationship-oriented. In a study conducted by Limsila and Ogunlana (2008) in the developing economies, transformational leadership was discovered as the major leadership style for construction projects in Thailand. They opined that

transformational leadership generated better leadership outcomes than either the transactional or *laissez-faire* styles. Transformational leadership produces higher work quality and volume, as well as creative problem-solving by subordinates. However, adding to the growing evidence of lack of support for the stereotypical views on how task and person orientated leadership manifest, Wong et al. (2007) found no differences in the level of task and person orientated leadership exhibited by expatriate and Chinese project managers. This is contrary to the conventional wisdom that Western managers are more task orientated while their Chinese counterparts are more person orientated. Moreover, Wong et al. (2007) suggested that a 'third leadership style' which equally considers the importance of task delivery and interpersonal relationship might also exist in the multinational construction firms in Hong Kong". The findings show that in client, consultant and dual teams only person-oriented leadership is significantly associated with psychological empowerment, while in contractor organizations only task orientated leadership is significantly associated with psychological empowerment. This implies that, the success in managing a sub-system is largely rooted in the successful management of interrelationships (person-oriented leadership) while the success of the operating or task sub-system lies in task delivery.

Essentially, the person orientated reflects a non-directive, relationship based leadership that emphasizes trust and mutual respect between leaders and subordinates. On the other, the task orientated places emphasis on the task or the technical aspects of the work. Transformational leadership behaviours, which emerge from the relationship/person orientation perspective, exhibits the most direct link to psychological empowerment.

Evidences from developing countries show that studies on construction leadership are still much more relevant and insufficient. Studies on leadership in the Nigerian construction environment revealed that democratic, transactional and transformational are relatively practiced (Oke & Gbadura, 2010). In another study,

Odusami (2003) examined the relationship between project leadership, team composition and construction project delivery in Nigeria but the study lacked focus on leadership styles. This study therefore examines leadership styles and factors influencing these leadership styles in the Nigerian construction environment with a view to bridge the gap in literature and provide information to practitioners on leadership styles suitable in the construction environment within the Nigeria context. Therefore, the need arose for a consideration of a leadership style that is responsive to the nature and characteristics of a project.

2.10 Project Delivery

One of the key considerations in project management is on what needs to be done to improve project delivery (Love, et. al., 2011). However, as noted by several researchers, there is no consensus on project delivery criteria that can be used across various projects (Zhang & Fan, 2013; Khan, Khan, Akhtar & Ahmad, 2014). This is partly because different stakeholders view project delivery differently and a project that seem successful to the client may be unsuccessful venture for contractors or end users (Toor & Ogunlana, 2010; Jugdev & Muller, 2005; Cookie-Davies, 2002).

A review of existing literature shows a number of project delivery evaluation models are in use with one of the most commonly used models being the "Iron Triangle" or "Golden Triangle" in which project delivery is evaluated based on completion of the project within time, cost and quality (Atkinson, 1999). However, various researchers (Lim & Mohamed, 1999; Shenhar, 2001) have criticized the use of iron triangle criteria due to its simplicity in evaluating project delivery and have proposed inclusion of other aspects such as key stakeholders' satisfaction, potential to the organization and customers' benefits. In addressing weakness of the "Iron Triangle", Hwang, Tan, & Sathish, (2013) posited that project delivery can be assessed in both qualitative and quantitative terms by considering outcomes such as cost, time, safety, quality and rework. In addition, Zhang & Fan (2013)

developed a model for evaluation of project delivery in construction projects with model parameters being meeting project's overall delivery (time, cost and quality); meeting owner's requirements; meeting project's multiple goals (health and safety, risk management, claim management and absence of conflict) and stakeholders' satisfaction (owner, project team, end-user, suppliers and other stakeholder satisfaction).

Further, Gowan & Mathieu (2005) contended that project delivery can be assessed by time, cost, quality, satisfaction and business value parameters. Although a number of models exist to evaluate project delivery, the conventional measures of time and cost, which were used in this study, dominate delivery measurement in the construction industry due to their objectivity (Pinto & Slevin, 1988; Cookie-Davies, 2002). In addition, some of the parameters such as absence of conflict, end-user satisfaction, risk management that were proposed in other models require passage of time between project completion and evaluation of project delivery.

Based on time and cost evaluation criteria, projects may experience delays and cost overruns. Assaf & Al-Hejji (2006) defined project delay as the time over- run either beyond completion date specified in the contract or beyond the date that the parties agreed upon for the delivery of a project. On the other hand Kaliba, Muya, & Mumba, (2009) defined cost overrun/escalation as the increase in the amount of money required in completing a project over and above the original budgeted amount.

2.11 Leadership and Project Delivery

Kissi, *et al*. (2013) examined the impact of portfolio manager's transformational leadership style on project delivery through administration of questionnaires to 350 project managers in the United Kingdom (UK). Using data from 112 completed responses, the study found that transformational leadership behavior of portfolio managers was positively related to project delivery. However, the study was based

on one organization which limited generalization of the results. In addition, risk of common source data was present as data was collected from project managers only and hence other project team members' perspectives were not included in the study.

In a study to assess leadership style in the construction industry, Tabassi & Babar (2010) administered 220 questionnaires to top management team members of large construction companies in Iran. Analysis of data from 107 responsive questionnaires identified transformational leadership style as the most common style in the Iranian construction industry. However, their results of high task and almost high relationship were in contradiction with those of Walker & Kalinowski (1994) who had observed a low-task and high relationship attitude as appropriate leadership style in Hong King. In addition, data was only collected from contractors and hence did not incorporate views of other project team members.

Prabhakar (2005) investigated the importance of transformational leadership style on project success using a two-phased study. In the first phase, there were 46 respondents out of 225 contacted, while in second phase there were 107 responses out of 400 contacts made. Using data collected from 153 project managers across 28 nations, the study found that 51.7 percent of variance in project success was due to project manager's years of experience, relationship orientation, and teams understanding of the technology being used, project manager's leadership and management style.

Although the study established that project managers switch leadership styles during project execution, no significant correlation was found on its impact on project delivery. In addition, the study found a positive relationship between transformational leadership style and project success, which supports Keegan and Den Hartog (2004) assertion on the importance of transformational leadership style in projects. Further, project manager's experience was found to be positively correlated with project success. However, project managers assessed their own

leadership style and thus project team views were not considered to give a 360 degree view of the relationship between leadership and project delivery.

In addition, project delivery was subjectively assessed based on the perception of project managers, which introduces the risk of overrating of delivery. Limsila & Ogunlana (2008) examined the relationship between project manager's leadership style, subordinates' commitment and work delivery in Thailand's construction industry. Using data from 52 construction projects in which there were 52 project managers, 92 engineers and 12 architects, it was found that project managers switch leadership style based on the needs of the project. However, transformational leadership style was found to be the most dominant style in Thailand.

While leadership and leadership styles have been identified as critical factors in organisation performance, a literature search by Turner & Muller (2005) found inadequate coverage of the impact of project manager's leadership style/competencies and project performance. In addition, given results from existing studies, there has not been consensus in the area of project performance on which project manager's leadership style would guarantees high level of project performance (Kissi, et al., 2013; Muller, et al., 2012; Yang, et al., 2011). Thus, with majority of the articles in project management (Clarke, 2012; Kissi, et al., 2013; Muller, Geraldi, & Turner, 2012; Yang, et al., 2011) linking transactional and transformational leadership styles, and project performance, there was need to identify which leadership style would lead to higher level of project performance.

2.15 Leadership, Project Characteristics and Project Delivery

Yakhchali & Farsani (2013) carried out a study to assess whether different project categories require different leadership styles. The study involved administration of 341 questionnaires to project managers in Iran, out of which 106 usable questionnaires were received. The results showed differences in leadership style of project managers in successful projects in different application areas, which was in

line with the finding by Crawford & Cooke- Davies (2012) that project manager's leadership style influenced project success and that different leadership styles were appropriate for projects in different application areas. However, their finding was in sharp contrast to Muller and Turner (2010) who found no significant difference in project manager's competencies for projects in different application areas. The study also found differences in leadership styles of project managers in successful projects of different project typicality, which suggested that specific leadership styles were more appropriate in specific project categories and hence the relationship between leadership style and project delivery was being moderated by project characteristics. Since questionnaires were administered to project managers only, there was high risk of mono-source bias, which could have resulted in high self-rated delivery.

Muller & Turner (2010) investigated leadership competency profiles of successful project managers through administration of a web based questionnaire to project management professional and masters students in project management in the UK, Ireland, Australia, New Zealand, USA and Canada. Using data from 400 returned questionnaires, they found differences in project manager's leadership competency profiles in terms of complexity and contract type and not in terms of application area and project importance. They also found manifestation of critical thinking, influence, motivation and conscientious in all successful project managers. Based on the results, they proposed the need for more transactional style in simple projects and more transformational style in complex projects. However, their study did not analyze profiles of project managers of successful projects with low complexity due to their small sample size. In addition, project size was not considered in their study.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter presents the methodology used in carrying out the study. It discusses the research design adopted for the study, the study population and sample, as well as the sampling technique used in the study. Also discussed in this chapter are methods of data collection, sources of data used for the study, data collection instruments and statistical tools used for data analyses. The study is designed in a manner that enabled the researcher to collect reliable data that helped to provide answers to the research questions put forward in the study. The data and methodologies used in this study are adjudged as being able to provide reliable findings under the given circumstance in which the research study is conducted.

3.1. Research Design

A research design is the logical structure of an investigation or research study. It clearly states what data is required, from whom, and how it intends to help answer the research questions in the study (Jalil, 2013; Creswell, 2003).

A quantitative descriptive approach was adopted for this study. This design was adopted because it allows for the collection of quantitative data on the study variables and analyses of these variables to determine whether there are significant relationships among the variables (Gall, Gall, & Borg, 2007; Swanson & Holton, 2005).

3.2. Sources of Data in the Study

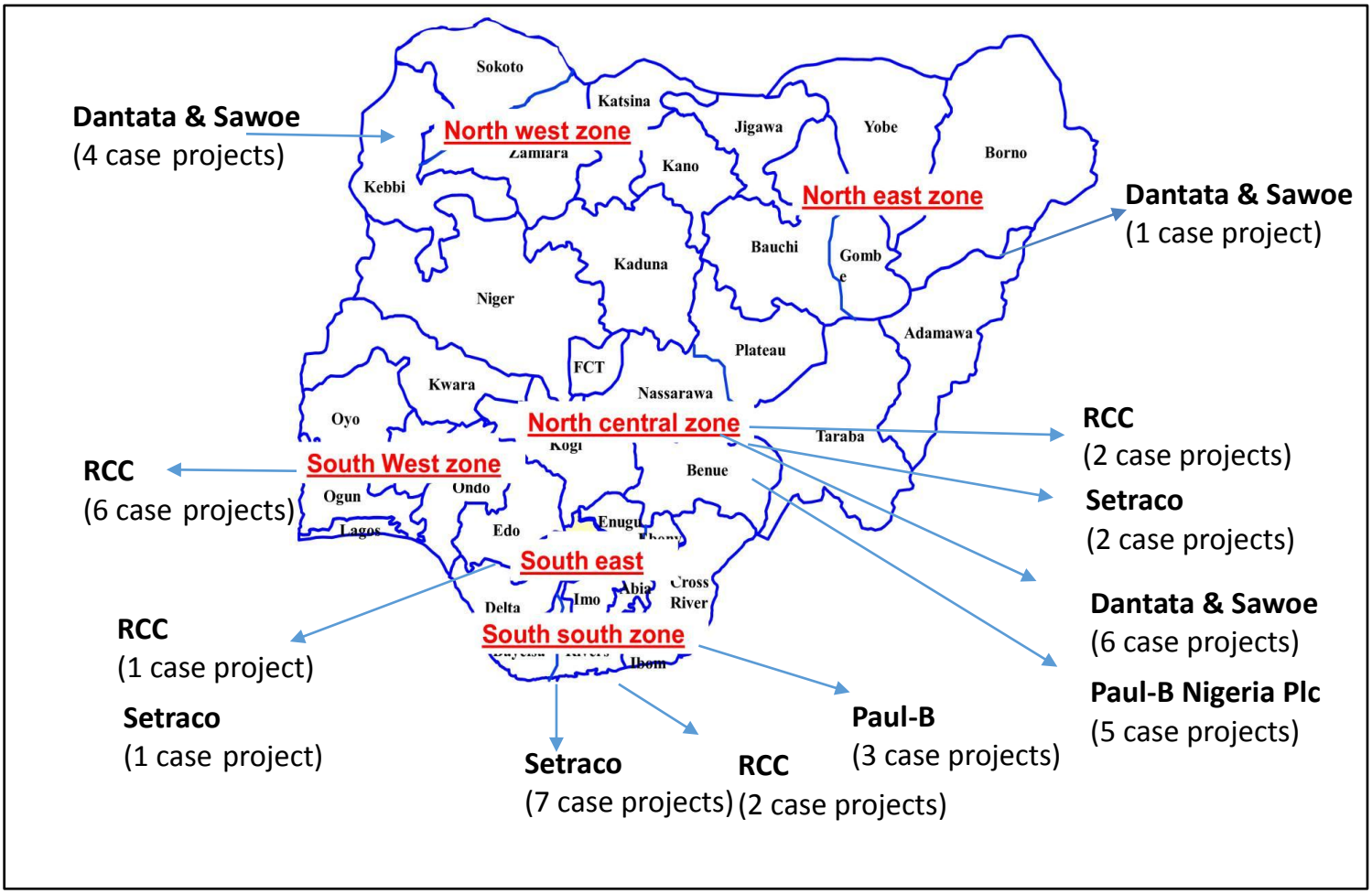
This study data from case projects obtained from four construction companies. In the secondary source of data collection, the researcher relied on the data provided by the organisation and responsible individuals in the organization. Such data are frequently stored on the company database or published, as the organisation deems appropriate. To facilitate the survey process, a data collection form was developed

(appendix 1 and 2).

3.3. Population and Sample Size Determination

The population for the study is a total of forty (40) construction projects provided by four construction companies namely: Dantata and Sawoe Construction Company Limited, Setraco Nigeria Limited, Reynolds Construction Company Limited and Paul-B Nigeria Plc (appendix 3). Given the population size of 40 projects, there was no basis for sample size determination; hence, the study and analysis were carried out on the population size. The map of Nigeria below in figure 3.1 indicates the zones of the construction companies and project locations.

Figure 3.1: Map of Nigeria indicating construction companies and project locations



3.4. Method of Data Collection

Data collection was carefully generated through a secondary data collection form (Appendix 1 and 2) developed for the purpose of the study and delivered to four construction companies. This included an introductory letter stating the purpose of the study and the nature of data required from projects executed by the respective construction companies and the adopted leadership styles. Completed data collection forms indicating project type, location, date of commencement, project completion time, ranking of success factors, adopted leadership styles and level of compliance by project team members were compiled into a data entry sheet (see Appendix 3).

3.5. Data Analysis Techniques and Statistical Tools

The researcher employed two different statistical tools for analyzing the secondary data and test of hypotheses: Earned Value Analysis and one-way Analysis of Variance (ANOVA).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

This chapter is a presentation and analysis of the secondary data used in the study. The data were collected using a form shown in appendix 1 and 2, designed to capture available information specific to construction projects executed in the selected companies from 1999 – 2017 to determine whether the variables they pertain to have significant relationship or not with project delivery.

4.2. Presentation of Data

Secondary data obtained from 40 projects across four construction companies include data on project type, client, scheduled duration, start date, project completion time, leadership style adopted by project managers and level of compliance by project team members. It is noteworthy that the construction companies did not disclose data on project cost for the selected projects but provided relevant information on the earned value analysis for each construction project in the secondary data.

4.3. Analysis of Data

Project 1 shows a Construction of two Flyover Bridges at AYA Junction in Abuja simultaneously by Dantata & Sawoe Construction Company financed by the Federal Capital Territory from April 2009 – October 2010. While the company adopted democratic leadership style in the execution, the project experienced a time overrun of 30 days following its completion within 570 days as against a scheduled duration of 340 days with an Earned value of - 6. In this instance, the project was under-delivered despite the project manager receiving a high degree of compliance from the project team members in terms of the leadership style adopted.

In the execution of **Project 2**, Construction of Airstrip / Runway for Dangote

Cement Factory in Obajana, Dantata and Sawoe delivered the project within timeline. Although the project was scheduled to be executed within 900 days, it was completed within 810 days with an earned value of 10. While autocratic style of leadership was adopted, the project manager enjoyed a high degree of compliance from the project team members.

In the execution of the expansion project of ONEX Outer Norther Expressway under **Project 3** Dantata and Sawoe delivered the project with a time overrun of 30 days and an earned value of -3 indicating poor project delivery. While transformational leadership style was employed, the project manager received a moderate compliance from the project team members on the adopted leadership style.

Project 4 as executed by Dantata and Sowoe, involved the expansion of State Road/Ibrahim Taiwo Road, Kano with available data depicting a right in time delivery of the project with an earned value of 0. Democratic leadership style was employed by the project manager with a high compliance rate by project team members.

Project 5 (Dualization of Abuja - Abaji Road Lot1) experienced a time overrun from a scheduled duration of 1440 days to a completion time of 3000 days with an earned value of -108. Given that transactional leadership style was adopted by the project manager in Dantata and Sawoe, compliance rate was found to be very low.

Construction of Kano Western By-Pass including bridges under **Project 6**, was completed within 240 days while the scheduled project duration was 540 days with an earned value of 56. Autocratic leadership style was employed for the project with a very high compliance level by project team members.

Construction of infrastructure for a highbrow residential estate in Dutse as **Project 7**, was delivered 90 days before the scheduled time with an earned value of 13.

Autocratic leadership style was employed for the project with a very high compliance level by project team members.

Reconstruction of a 4.5km state road & Ibrahim Taiwo road in Kano under **Project 8** was completed 60 days prior to the scheduled duration with an earned value of 6. Transformational leadership style was employed with a moderate compliance level by project team members.

Project 9 entailed infrastructure development for a Housing Estate financed by ASO Savings in Abuja. The project experienced a time overrun of 270 days with an earned value of -25. Transformational leadership style was employed with a high level of compliance by the project team members.

Infrastructure development for Housing Estates for BUA Group in Abuja under **Project 10** was completed prior to the slated duration with an earned value of 44. Autocratic leadership style was employed for the project with a high level of compliance by the project team members.

Project 11 involved construction of a fly-over bridge at Mogadishu Cantonment/Sunrise Hills Estate in Abuja and executed by Setraco Nigeria Limited depicted a right in time delivery with an earned value of 0. Autocratic style of leadership was employed by the project manager with a high compliance rate by project team members.

Setraco Nigeria Limited executed the dualization of Abuja - Keffi Road in the Federal Capital Territory under **Project 12** on schedule with an earned value of 0. Democratic style of leadership was employed by the project manager with a moderate compliance level by project team members.

Dualization Benin Airport Road & Storm Water Control as executed by Setraco and financed by the Edo State Government under **Project 13** recorded a time overrun of 60 days and an earned value of -8.. Democratic style of leadership was employed by

the project manager with a very high compliance rating.

Project 14 captured the construction of Otuocha Bridge executed by Setraco Nigeria Limited and financed by the Federal Ministry of Works. The project was completed within the project timeline with an earned value of 0. Transformational style of leadership was adopted by the project manager with a very high compliance to the leadership style by the project team members.

Setraco Nigeria Limited completed **Project 15**, construction of Ughoton - Omadino Bridge and delivered the project to Delta State Government prior to the scheduled duration with an earned value of 10. Autocratic style of leadership was adopted by the project manager with a very high compliance to the leadership style by the project team members.

Project 16 involved the Construction of Amassoma - Toru - Ebeni Bridge and Access Road executed by Setraco for Bayelsa State Government. The project was completed within the stipulated timeline with an earned value of 0. The project team members adopted transformational leadership style for this project with a high compliance level.

Project 17 captured the rehabilitation of Enugu-Abakaliki Road, a world bank financed project executed by Setraco Nigeria Limited from December 2001 to April 2014. The project was completed within 840 days of the scheduled timeframe with an earned value of 30. Autocratic leadership style was employed for this project with a reasonable compliance level by the project team members.

Project 18 entailed the reconstruction of Jattu - Afowa - Itora - Akpana - Ayogwiri road in Edo State as obtained from Setraco Nigeria Limited. The project was completed within 1080 days of the scheduled duration with an earned value of 10. Autocratic leadership style was employed for this project with a low compliance level.

Project 19 captured the construction of Mkpat Enin-Ikot Abia -Ikot Etefia - Ikot Essang Road in Akwa Ibom State as obtained from Setraco Nigeria Limited. The project was completed within the scheduled duration of 720 days with 0 earned value. Autocratic leadership style adopted during the project yielded a low compliance level by the project team members.

Construction of Afaha Obong-Etim Ekpo-Urua Inyang Iwukem Road by Setraco as captured under **Project 20** was completed within 1080 days of then scheduled duration with an earned value of 10. Application of transformational leadership style during the project yielded a high compliance level by the project team members.

Project 21 illustrated the conditions for the rehabilitation of Shagamu- Ajebandele-Ore-Benin Road executed by Reynolds Construction Company from January 2011 to December 2013. The project experienced a time overrun of 150 days with an earned value of -17. Transformational leadership style adopted during the project yielded a high degree of compliance by the project team members.

Project 22 involved the dualization of Slaughter/Trans Amadi/Rumuobiakani Road by Reynolds Construction Company for the Rivers State Ministry of Works and Transport from December 2010 to December 2012. The project was completed within the stipulated duration with an earned value of 0. Autocratic leadership style adopted during the project yielded a very high degree of compliance by the project team.

Rehabilitation of Lagos-Shagamu Expressway by Reynolds Construction Company is captured under **Project 23** and executed from April 2005 to October 2008. The project experienced a time overrun of 120 days with an earned value of -10. Democratic leadership style was employed for the project with a low level of compliance by the project team members.

Project 24 captured the construction of Central Bank of Nigeria Prototype State Branch Building in Awka by Reynolds Construction Company. The project was completed earlier than the stipulated duration of 1200 days with an earned value of 15. Application of transformational leadership style gave rise to a very low level of compliance from project team members.

Project 25 entailed infrastructure project at Katampe District Extension in Abuja by Reynolds Construction Company. The project was completed earlier than the stipulated duration of 1440 days with an earned value of 8. Application of transformational leadership style gave rise to a moderate level of compliance from project team members.

Project 26 involved the construction of concrete median barrier on Lagos- Ibadan Expressway by Reynolds Construction Company. The project was completed within 270 days, earlier than the stipulated duration of 360 days with an earned value of 25. Application of autocratic leadership style gave rise to a low level of compliance from project team members.

Project 27 depicted the rehabilitation of Shagamu-Ajebandele-Ore-Benin Road Section I (Ajebandele – Ofosu Road) in Ondo State by Reynolds Construction Company. The project was completed within 1320 days, earlier than the stipulated duration of 2040 days with an earned value of 15. Application of transformational leadership style gave rise to a high level of compliance from project team members.

Project 28 involved the Middle Ogunpa Water Channelization project by Reynolds Construction Company financed by the Ecological Fund Office of the Presidency, Abuja. The project was completed within 780 days, earlier than the stipulated duration of 900 days with an earned value of 13. Application of autocratic leadership style gave rise to a very high level of compliance from project team members.

Construction of a New Chancery and Official Residence at the South African Embassy in Abuja was done by Reynolds Construction Company under

Project 29. The project was completed within 450 days, earlier than the stipulated duration of 540 days with an earned value of 17. Application of autocratic leadership style gave rise to a high level of compliance from project team members.

Reynolds Construction Company under Project 30 did rehabilitation and asphalt overlay of Benin-Shagamu Dualization Carriageway (Benin-Ofosu Section, Phase I) in Edo State. The project experienced a time overrun from the scheduled 900 days duration to a project completion time of 930 days with an earned value of -3. Application of autocratic leadership style gave rise to a very high level of compliance from project team members.

Construction of World Gate Shopping Complex was executed by Paul-B Nigeria Plc under **Project 31** for the World Gate Group Limited. The project was completed within 510 days, earlier than the stipulated duration of 700 days with an earned value of 27. Application of autocratic leadership style gave rise to a very high level of compliance from project team members.

Construction of the Nigeria Football Association Headquarters was executed by Paul-B Nigeria Plc from February 2008 to December 2009 under **Project 32**. The project was completed within 660 days, earlier than the stipulated duration of 720 days with an earned value of 8. Application of autocratic leadership style gave rise to a very high level of compliance from project team members Application of autocratic leadership style gave rise to a very high level of compliance from project team members.

Project 33 captured the rehabilitation and extension of the State House Medical Centre, Abuja by Paul-B Nigeria Plc from April 2010 to December 2010. The project was completed within 240 days, earlier than the stipulated duration of 360

days with earned value of 33. Democratic leadership style gave rise to a high level of compliance from project team members.

Project 34 captured the construction of an aircraft/helicopter hange at for the Ministry of Police Affairs at the Nnamdi Azikiwe International Airport in Abuja by Paul-B Nigeria Plc. The project was completed within 640 days, earlier than the stipulated duration of 720 days with an earned value of 11. Autocratic leadership style gave rise to a very high level of compliance from project team members.

Project 35 captured the construction of the Faculty of Engineering (Phase I) Workshop Complex in University of Abuja by Paul-B Nigeria Plc. The project experienced a time overrun from 1000 to 1020 days with an earned value of -2. Transformational leadership style gave rise to low compliance from project team members.

Project 36 illustrated the construction of a Zonal Information and Resource Centre, in Calabar by Paul-B Nigeria Plc financed by the Ministry of Information & National Orientation, Abuja. The project experienced a time overrun from 300 to 360 days with an earned value of -20. Autocratic leadership style gave rise to high compliance from project team members.

Project 37 captured the renovation of CBN Branch Office in Benin by Paul-B Nigeria Plc financed by the Central Bank of Nigeria. The project was completed within 180 days, earlier than the stipulated duration of 240 days with an earned value of 25. Autocratic leadership style by the project manager gave rise to high compliance from project team members.

Project 38 involved the construction of a commercial complex in Garki Area 11, Abuja by Paul-B Nigeria Limited for Sharon Properties from April 2008 to March 2009. The project was completed within 330 days, earlier than the stipulated duration of 360 days with an earned value of 8. Application of autocratic leadership

style gave rise to a high compliance from project team members.

Project 39 captured the construction of the laboratory center at the Petroleum Training Institute, Effurun, in Delta State by Paul-B Nigeria Limited for Sharon Properties from March 2013 to December 2013. The project was completed within 270 days, earlier than the stipulated duration of 360 days with an earned value of 25. Democratic leadership style attracted low compliance from project team members.

Project 40 illustrated the construction of the Global Distance Learning Centre by Paul-B Nigeria Limited for Federal Ministry of Finance, Abuja from August 2012 to February 2013. The project was completed within 254 days, earlier than the stipulated duration of 900 days with an earned value of 40. Application of autocratic leadership style witnessed low compliance from project team members.

Table 4.1 shows the distribution of the data according to frequency of each leadership style.

Leadership Style	**Frequency**	**Percentage (%)**	**Completion Rate (%)**
Autocratic	**20**	**50**	**90**
Transformational	**13**	**32.5**	**69.2**
Democratic	**6**	**15**	**50**
Transactional	**1**	**2.5**	**0**

Table 4.1. *Distribution of the data according to occurrence of leadership styles and completion rate*

From the data, autocratic style of leadership was found to be the prevalent leadership style adopted in 50% of the construction projects. This is followed by transformational leadership style, accounting for 32.5% of the projects while democratic and transactional leadership styles accounted for 15% and 2.5% of the

selected projects, respectively.

Of the construction projects in which autocratic leadership style was adopted, 90% of the projects were completed within timeline. However, data on other factors such as project cost, quality and stakeholder satisfaction were not available to support a further conclusion on appropriate leadership style.

On the other hand, 69.2% of projects for which transformational leadership style was adopted, were completed either on schedule or before the project duration while 50% of the projects for which democratic leadership style was adopted by the project managers were completed on schedule or before the scheduled duration. On the other hand, transactional leadership style, which was observed as adopted in one project instance, and recorded a project time overrun and a negative earned value.

In terms of level of compliance by project team members, autocratic leadership style recorded 75% compliance, suggesting the dependence on this leadership style by project managers who are akin to expecting full compliance from project team members in the execution of projects. Democratic leadership style gave rise to 66.7% compliance by project team members. This is another leadership style that suggested a relatively high level of compliance followed by transformational leadership style with a 46% level of compliance. Transactional leadership style adopted for a project gave rise to a very low level of compliance by project team members.

4.4. Test of Hypotheses H01, H02, H03, H04

Ranking of the leadership styles with respect to their earned values (indicated in appendix 3) was adopted to test the following hypotheses:

$H_0$1: Transactional leadership style has no significant contribution to construction project delivery.

$H_0$2: Transformational leadership style has no significant contribution to construction project delivery.

$H_0$3: Democratic leadership style has no significant contribution to construction project delivery

$H_0$4: Autocratic leadership style has no significant contribution to construction project delivery.

As a decision rule, earned value =/> 0 as accepted to have indicated project delivery on schedule while earned value < 0 is rejected and thus did not meet project delivery criteria on schedule.

Table 4.2. Ranking of the leadership styles based on project earned values

Leadership Style	**Earned Value < 0**	**Earned Value > 0**
Autocratic	**2**	**18**
Transformational	**4**	**9**
Democratic	**3**	**3**
Transactional	**1**	**0**

From the ranking of the leadership styles with respect to project earned value in Table 4.2, autocratic leadership has the most significant contribution to construction project delivery followed by transformational leadership style.

4.4. Test of Hypothesis H05

A one-way Analysis of Variance (ANOVA) technique was used to determine the level of adherence to project manager's leadership styles and the impact on project delivery time.

$H_0$2: Project team members' level of compliance to project managers' adopted leadership styles has no impact on project delivery time.

Table 4.3. One-way Analysis of Variance (One-way ANOVA)

Dependent Variable: Project Completion Time (days)

Independent Variable: Adherence Level to adopted Leadership style

	Sum of Squares	df	Mean Square	F	Sig.
Adherence Level to adopted Leadership Style	3840310.879	4	960077.720	4.571	.004
Error	7351279.121	35	210036.546		
Total	11191590.000	39			

Source: *Researcher's SPSS One-way ANOVA Output, 2017.*

Table 4.3 shows the result of the one-way ANOVA carried out to determine the impact of adherence to project manager's leadership style by project team members on project delivery time. The result suggested that adherence to adopted leadership style has a statistical significant impact on project delivery time ($F_{(4, 35)} = 4.571$, P = 0.004). This implies that the null hypothesis ($H_0 2$) has to be rejected. We therefore conclude that adherence to adopted leadership style has a statistical significant impact on project delivery time in the construction industry.

4.5. Discussion of Findings

From the study of the construction projects, autocratic style of leadership was found to be prevalent, accounting for 50% of the construction projects, producing a 90% completion rate as indicated in table 4.1. It was further illustrated with the ranking of the leadership styles in table 4.2 with respect to project earned values. This aligned with the findings of (Oke and Gbadura, 2010) earlier study. Following a one-way analysis of variance illustrated in table 4.3, a statistically significant difference was observed in the leadership styles adopted by project managers in the execution of the selected construction projects, therefore, revealing that specific leadership styles are adopted for different construction projects with a view to

effective project delivery. The result showed differences in leadership style of project managers in successful projects in different application areas, which was in line with the findings by Crawford & Cooke-Davies (2012).

The study provided perspectives on the influence of team members' compliance to project manager's leadership style on project delivery time. The results of the analysis supported the assertion that project managers are capable of accomplishing construction projects to timelines if they are able to achieve high compliance to their leadership styles from project team members.

From the study, it was established that differences in leadership styles of project managers have significant influence on successful project delivery of different project characteristics. The finding therefore suggested that specific leadership styles were more appropriate in specific project categories and hence the relationship between leadership style and project delivery was being moderated by project characteristics.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Summary of Findings

The findings from the study support the conceptual framework that leadership style plays a significant role in influencing effective construction project delivery. The empirical information presented in the literature review suggested that emphasis on leadership as a model could contribute to overcoming many of the challenges faced by project managers beyond appropriation of resources such as manpower, funds, time and quality considerations.

An analysis of empirical literature on the relationship between leadership style, teamwork, project characteristics and project delivery was undertaken and a number of research gaps were identified. These gaps include lack of consensus on which particular leadership style would enhance the likelihood of a project being successful. Furthermore, there is lack of consensus on the effect of project characteristics such as environment and location on the relationship between project manager's leadership style and project delivery. The literature review also indicated that available research relating to the influence of leadership on successful project outcomes is limited.

Statistical analysis of the data from the study conveyed a prevalence of autocratic leadership style in the construction projects under review. It was also established that project managers for different projects employed diverse leadership styles. The leadership styles thus employed had various significant influence on the construction projects.

5.2. Conclusion

Based on the findings of the study and review of related studies, it sufficed to state that leadership style influences effective delivery of construction projects. This relationship is further moderated by the level of compliance to the adopted

leadership styles by project team members. This is however not exhaustive as other factors that affect construction project outcomes such as cost, quality of finished project and stakeholder satisfaction were not were not independently considered given the limitation of data available from projects executed by the construction companies under review. The study depended entirely on the secondary data obtained from the organization given the subjectivity envisaged in the application of a primary data for the study as project managers in the selected organizations could not recollect or confirm their involvement in the projects on which data were provided by the organizations. Consequently, a number of limitations to this study were identified.

5.3. Recommendations

Based on the study findings, the following are recommended:

5.3.1. Conscious application of leadership skills by project managers involved in construction projects for effective project delivery is recommended. This is relevant given that human factors increase in importance as projects increase in complexity, risk, and innovation.

5.3.2. Project managers should endeavor to stimulate compliance to their leadership styles from project team members by employing relevant leadership skills to achieve successful project delivery

5.3.3. There is need for a comprehensive study that would incorporate other factors of project delivery such as quality, cost, environment and stakeholder satisfaction and their relationship with project manager's leadership styles.

5.3.4. Researchers and the academia can leverage on the findings of this study to propose and implement curriculum design that incorporates a conscious blend of technical and leadership skills necessary for successful construction project delivery. With project management being an emerging and dynamic

discipline, the findings of this study can stimulate further research in project leadership.

5.4. Contribution to Knowledge

The study has contributed to knowledge on the significance of appropriate leadership styles for effective project delivery, especially in Nigeria and provided a basis for project leadership as a construct in project management curriculum. The study contributed in establishing the uniqueness of project delivery in Nigeria when compared with the findings from previous studies. This is evident in the success rate of project delivery as determined through the earned values on application of autocratic leadership style. The study also reinforced the academic concept of project earned value determination as a construct for evaluation of project implementation.

Previous studies on project leadership suggested a shift towards transformational leadership in the construction industry (Chan and Chan, 2005) and leader emotional intelligence (Liu & Fang, 2006; Toor & Ogunlana, 2008b) while Limsila & Ogunlana (2008) in a study in the developing economies posited transformational as the major leadership style for construction projects in Thailand. In a study to assess leadership styles in the construction industry in Iran, Tabassi & Babar (2010) also identified transformational leadership style as the most common style in the Iranian construction industry.

Love (2007) also opined that two leadership styles dominate the construction

management literature and they are charismatic and transformational. On the contrary, this study of construction projects found autocratic leadership as the dominant leadership style adopted by construction project managers in the companies under review in Nigeria with 50% occurrence and 90% project delivery within specified project durations. This is supported with the ranking of the earned values of the projects with respect to leadership styles.

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APPENDIX I
LETTER OF INTRODUCTION

Department of Project Management
Technology School of Management
Technology
Federal University of Technology, Owerri

March 2017

The Administrative Manager,

Dear Sir/Madam,

REQUEST FOR INFORMATION FOR A RESEARCH STUDY

I am a Postgraduate student of the above mentioned department and institution; and as a requirement for the award of a Master's Degree in Business Administration, I am carrying out a research study on the topic: Evaluation of Leadership Styles for Effective Construction Project Delivery. Your company has been selected as one of my case studies.

I hereby solicit for your assistance and cooperation in providing me with some relevant data to enable me carry out my study effectively. Kindly use the attached template to furnish me with the requested information.

I also want to assure you that any information you provide will be used for academic research purposes only. No part of the information provided by you in this template will be shared or communicated without your authorization. All information supplied here will be treated with strict confidence, whilst utmost privacy is maintained.

Thank you for your cooperation.

Yours faithfully

ODENIGBO, Uzodinma Ernest
Research Student

Appendix 2
Secondary Data
Collection Form

							Ranking: Scale of 1 - 5, 1 is least and 5 is highest		
Company	**Project Type**	**Client**	**Scheduled Duration (days)**	**Start Date**	**Project Completion Date**	**Project Completion Duration (days)**	**Manpower Capacity**	**Project Environment Friendliness**	**Leadership Style Adopted by Project Manager**
							-		
							-		
							-		
							-		

Key:
1 - Very Low
2 - Low
3 - Moderate
4 - High
5 - Very High

Key:
Very unfriendly
Unfriendly
Moderate
Friendly
Very friendly

Appendix 3: Secondary Data

Project	Company	Project Type	Client	Scheduled Duration (days)	Start Date	Date of Completion	Actual Project Duration (days)	Earned Value	Leadership Style Adopted by Project Manager	Ranking: Scale of 1 - 5, 1 is least and 5 is highest Level of Compliance by Team Members	
Project 1	Dantata & Sawoe	Construction of 2 Flyover Bridges at AYA Junction, Abuja	Federal Capital Territory	540	Apr-09	Oct-10	570	-6	Democratic	5	18
Project 2	Dantata & Sawoe	Construction of Airstrip/Runway for Dangote Cement Factory Obajana, near Lokoja, Kogi State	Dangote Industries Limited	900	Aug-12	Nov-14	810	10	Autocratic	4	30
Project 3	Dantata & Sawoe	Expansion of "ONEX Outer Norther Expressway	Federal Capital Territory	1200	Jul-09	Dec-12	1230	-3	Transformational	3	40
Project 4	Dantata & Sawoe	Expansion of State Road / Ibrahim Taiwo Road, Kano	Kano Stte Government	540	Jun-15	Dec-16	540	0	Democratic	4	18
Project 5	Dantata & Sawoe	Dualization of Abuja - Abaji Road Lot1	Federal Min. of Works, Abuja	1440	Oct-07	Feb-16	3000	-108	Transactional	1	48
Project 6	Dantata & Sawoe	Construction of Kano Western By-Pass including bridges	Federal Min. of Works	540	Apr-07	Dec-07	240	56	Autocratic	5	18
Project 7	Dantata & Sawoe	Construction of Infrastructure for High-brow Residential Estate, Dutse	Jigawa State Government	720	Nov-12	Aug-14	630	13	Autocratic	5	24
Project 8	Dantata & Sawoe	Reconstruction of State Road & Ibrahim Taiwo Road, Kano 4.5 km	Kano State Government	1080	Feb-08	Dec-10	1020	6	Transformational	3	36
Project 9	Dantata & Sawoe	Infrastructure Development for Housing Estate ASO Savings, Abuja, FCT	Aso Savings & Loans Plc	1080	Mar-13	Dec-16	1350	-25	Transformational	4	36
Project 10	Dantata & Sawoe	Infrastructure Development for Housing Estates for BUA Group, Abuja	BUA Group	540	Jun-16	Apr-17	300	44	Autocratic	4	18
Project 11	Setraco	Construction of Fly-Over Bridge at Mogadishu Cantonment/Sunrise Hills Estate	Federal Capital Territory	720	Feb-12	Feb-14	720	0	Autocratic	4	24
Project 12	Setraco	Dualization of Abuja - Keffi Road	Federal Capital Territory	1440	Feb-01	Feb-05	1440	0	Transformational	3	48
Project 13	Setraco	Dualization Benin Airport Road & Storm Water Control	Edo State Government	720	Oct-11	Dec-13	780	-8	Democratic	5	24

Project 14	Setraco	Construction of Otuocha Bridge	Federal Ministry of Works	1080	Nov-99	Nov-02	1080	0	Transformational	5	36
Project 15	Setraco	Construction of Ughoton - Omadino Bridge	Delta State Government	1200	Sep-01	Sep-04	1080	10	Autocratic	5	40
Project 16	Setraco	Construction of Amassoma - Toru - Ebeni Bridge and Access Road	Bayelsa State	1560	Aug-05	Dec-09	1560	0	Transformational	4	52
Project 17	Setraco	Rehabilitation of Enugu-Abakaliki Road	World Bank	1200	Dec-11	Apr-14	840	30	Autocratic	3	40
Project 18	Setraco	Reconstruction of Jattu - Afowa - Itora Akpana - Ayogwiri road	Edo State Government	1200	Dec-09	Dec-12	1080	10	Transformational	2	40
Project 19	Setraco	Construction of Mkpat Enin-Ikot Abia - Ikot Ekpene - Ikot Essang Road	Akwa Ibom State	720	Aug-11	Aug-13	720	0	Autocratic	2	24
Project 20	Setraco	Construction of Afaha Obong-Etim Ekpo-Urua Inyang Iwukem Road	Akwa Ibom State	1200	Oct-07	Oct-10	1080	10	Transformational	4	40
Project 21	Reynolds Construction Company	Rehabilitation of Shagamu-Ajebandele-Ore-Benin Road	Federal Ministry of Works	900	Jan-11	Dec-13	1050	-17	Transformational	4	30
Project 22	Reynolds Construction Company	Dualization of Slaughter/Trans Amadi/Rumuobiakani Road	Rivers State Min. Works & Transport	720	Dec-10	Dec-12	720	0	Autocratic	5	24
Project 23	Reynolds Construction Company	Rehabilitation of Lagos-Shagamu Expressway	Federal Min. of Works, Abuja	1200	Apr-05	Dec-08	1320	-10	Democratic	2	40
Project 24	Reynolds Construction Company	Construction of CBN Prototype State Branch Building, Awka	Central Bank of Nigeria	1200	Jun-09	Apr-12	1020	15	Transformational	1	40
Project 25	Reynolds Construction Company	Katampe District Extension Infrastructure Project, FCT Abuja	Federal Capital Dev.Authority, Abuja	1440	Aug-08	Apr-12	1320	8	Transformational	3	48
Project 26	Reynolds Construction Company	Construction of Concrete Median Barrier on Lagos-Ibadan Expressway	Federal Min. of Works	360	Mar-08	Dec-08	270	25	Autocratic	2	12
Project 27	Reynolds Construction Company	Rehabilitation of Shagamu-Ajebandele-Ore-Benin Road Section I (Ajebandele – Ofosu Road in Ondo State) Contract No. 6000	Federal Min. of Works	2040	Jun-08	Apr-13	1740	15	Transformational	4	68
Project 28	Reynolds Construction Company	Middle Ogunpa Water Channelization	Ecological Fund Office, The Presidency, Abuja	900	Apr-07	Jun-09	780	13	Autocratic	5	30

Project 29	Reynolds Construction Company	Construction of a New Chancery and Official Residence	South African Embassy Abuja	540	Mar-10	Jun-11	450	17	Autocratic	4	18
Project 30	Reynolds Construction Company	Rehabilitation And Asphalt Overlay Of Benin-Shagamu Dualization Carriageway (Benin-Ofosu Section, Phase I) in Edo State	Federal Min. of Works, Abuja	900	Feb-18	Aug-10	930	-3	Autocratic	5	30
Project 31	Paul-B Nigeria Plc	Construction of World Gate Shopping Complex	Worldgate Group Ltd Durumi, Abuja	700	Nov-08	Apr-10	510	27	Autocratic	5	36
Project 32	Paul-B Nigeria Plc	Construction of Nigeria Football Association Headquarters	Nigerian Football Associations	720	Feb-08	Dec-09	660	8	Autocratic	5	24
Project 33	Paul-B Nigeria Plc	Rehabilitation/Extension of State House Medical Centre, Abuja	State House, Abuja	360	Apr-10	Dec-10	240	33	Democratic	4	12
Project 34	Paul-B Nigeria Plc	Aircraft/helicopter Hanger Nnamdi Azikiwe Int. Airport, Abuja	Min of Police Affairs	720	Jan-12	Sep-12	640	11	Autocratic	5	24
Project 35	Paul-B Nigeria Plc	Faculty of Engineering (Phase I) Workshop Complex	University of Abuja	1000	Jun-14	Apr-17	1020	-2	Transformational	2	
Project 36	Paul-B Nigeria Plc	Construction of Zonal Information and Resource Centre, Calabar	Min. of Information & National Orientation, Abuja	300	Oct-10	Oct-11	360	-20	Autocratic	4	40
Project 37	Paul-B Nigeria Plc	Renovation of CBN Branch Office. Benin City	Central Bank of Nigeria	240	Jun-12	Dec-12	180	25	Autocratic	5	8
Project 38	Paul-B Nigeria Plc	Construction of Commercial Complex Area 11 Abuja	Sharon Properties	360	Apr-08	Mar-09	330	8	Autocratic	4	12
Project 39	Paul-B Nigeria Plc	Construction of Laboratory Center Block at Petroleum Training Institute, Effurun, Warri, Delta State	Petroleum Technology Development Fund, Abuja	360	Mar-13	Dec-13	270	25	Democratic	2	12
Project 40	Paul-B Nigeria Plc	Construction of Global Distance Learning Centre	Fed. Min. of Finance Abuja	900	Aug-12	Feb-14	540	40	Autocratic	2	30