Scientific Research Publishing

Open Journal of Leadership, 2023, 12, 442-496
https://www.scirp.org/journal/ojl
ISSN Online: 2167-7751
ISSN Print: 2167-7743

Impact of Leadership Styles on Project Success in the Agro-Industry: Case Study of the Cameroon Development Corporation

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How to cite this paper: Elumba, N. N. (2023). Impact of Leadership Styles on Project Success in the Agro-Industry: Case Study of the Cameroon Development Corporation. *Open Journal of Leadership, 12,* 442-496.
https://doi.org/10.4236/ojl.2023.124021

Received: September 6, 2023
Accepted: December 2, 2023
Published: December 5, 2023

Abstract

Leadership is a critical factor in productive organizational behaviors and its role in project management cannot be neglected. The purpose of this study was to explore whether leadership styles have a positive impact on project success in the agro-industry. The exploratory case study design was used to investigate this relationship. The participants were employees of the Cameroon Development Corporation (CDC), between May 1, 2017 and March 31, 2020. We used convenient, purposeful and stratified sampling techniques to select the sample of 123 employees. A questionnaire was administered to the employees to collect data. The reliability of the questionnaire was tested and the alpha values of each of the three sub-scales of the instrument were greater than .70. Descriptive and inferential statistics were used to analyze the results; in this light, we used the Chi-square statistic to test the relationships between leadership styles and project success. The results (presented in tables and figures) revealed that: contingency leadership has a positive impact on project success in the agro-industry; democratic leadership has a positive impact on project success in the agro-industry; bureaucratic leadership has a positive impact on project success in the agro-industry. The study was discussed within the context of the current socio-political conflict which is posing difficult leadership and management challenges in the CDC. The conclusion was that leadership styles have a positive impact on project success in the agro-industry in Cameroon, but with some reservations that the study was conducted only in one agro-industrial and the results are limited to the type of companies operating in the agro-industry and having similar characteristics as the CDC. Some areas were suggested for further research such as: analyzing more corporations in the agro-industry with different characteristics; and a comparative study to analyze organizations that are operating in different industries, like telecoms, schools and public works.

Keywords

Leadership Style, Project Success, Success Criteria, Critical Success Factor, Impact

1. Introduction

1.1. Background of the Study

The purpose of this study was to explore whether leadership styles have a positive impact on project success in the agro-industry. The exploratory case study design was used to investigate this relationship. Leadership, whatever form it takes, is the main ingredient in all human endeavors and good leaders take their followers, organizations and projects to a better direction while bad leaders destroy organizations, negatively affect project success and ruin people. Moreover, leadership has taken a new dimension in the nowadays' ever-changing workplace setting. Results of a Gartner survey show that 90% of human resources leaders recognize that success in the modern workplace depends on a leader's ability to prioritize human aspects of leadership (Emeritus Institute of Management, 2022). There are many different definitions of leadership. According to Emeritus (Emeritus Institute of Management, 2022), leadership in general is the act of guiding and influencing others toward a common goal. It involves inspiring and motivating one's team, encouraging collaboration and making sound decisions. Boonla and Treputtharat (2014) define leadership as the process by which the leader can use his influence to convince in decision making process and setting the goals for the organization. In this regard, as a leader of the organization, he has to be ready in all aspects of all situations. The Oxford Dictionary of English (2010) defines leadership as the action of leading a group of people or an organization. Leadership is regarded as a process of sense-making and direction giving, within a group, for the realization of a common purpose or goal. The above definitions have a common thread; they point to key issues of influence, followership and willingness to undertake assignments aimed at achieving group goals. In order to inspire, leaders have to envision the future, instill values and show concern for employees and customers. In this regard, leaders ought to pay close attention to their team members and offer the guidance and support needed. They also need to empower others by delegating responsibilities and acknowledging their contributions. Furthermore, leadership equally necessitates adaptability; leaders need to navigate challenges and changes with resilience. Moreover, leaders ought to promote a positive and inclusive workplace setting by encouraging innovation and diversity in thinking. Thus, leadership is a dynamic process which requires effective communication, empathy and the capacity to motivate others to succeed.

In Cameroon, some studies have been conducted on the effect of leadership styles (For instance, Fokam (2016) studied the impact of leadership styles on the performance of small and medium size enterprises (SMEs); Nsom et al. (2019)

examined the effects transactional and transformational leadership styles on personnel conduct; Sunjo (2016) investigated and compared the relationship between organizational leadership and employee performance in public and private secondary schools; Wirba (2015) examined leadership styles of secondary school principals in Cameroon, in terms of transformational, transactional, and laissez-faire leadership styles). But studies regarding the impact of leadership styles on project success or project management in the agro-industry are very rare or difficult to find. According to Abia et al. (2016), the agriculture sector in Cameroon is amongst the major occupations for more than 70% of citizens and contributes greatly to the country's economy. Abia et al. (2016) further asserted that inaccessibility to adequate amounts of safe and nutritious food is a public health concern the world over, especially in Cameroon. Until the late 80's, Cameroon was considered self-reliant in agricultural production and played the role of food garret for its neighbors. Since the early 90's, Cameroon started spending billions of XAF to import large quantities of food items (rice, maize, onion, tomatoes, milk and poultry) although depending on national products has a clear comparative advantage (Abia et al., 2016). This has been very worrisome as it undermines local production potentials and can push several producers and projects out of the production chain due to unfair competition. The challenges are many including low levels of input like government's subsidies, poor leadership as well as the expected negative effect of climate change on agriculture.

The CDC is an agro-industrial company that has embarked in various expansion projects in the sectors of rubber, oil palm and banana. Some of the major expansion projects are: the Matouke Rubber Project in the Littoral Region; the Donga Mantung Expansion Project in the North West Region provide oil palm seedlings to smallholders; and the Manyu Expansion Project in the South West Region to assist smallholders with oil palm and rubber seedlings (CDC, 2018). In this respect, management and leadership have been recognized as critical in project success. But the CDC is currently in a serious crisis due to the sociopolitical conflict in the English-speaking regions of Cameroon (Business in Cameroon, 2023; The Guardian Post, 2023; CDC, 2018; Jeun Afrique, 2019; La Tribune Afrique, 2019). The crisis has inflicted untold hardship to many Cameroonians, given that the CDC is the second employer in Cameroon after the state. In this light, crisis management requires a critical consideration of strategic human resources with leadership styles. As consequences of the crisis, several estates of the company have been shut down and some of the projects abandoned because of attacks by the separatist fighters on its workers, factories and buildings. By the end of 2018, the company could not export bananas and this led to a drop of about 15,000 tons in the country's exports (Jeun Afrique, 2019). Also, the CDC is having financial problems and as such, 11,000 thousand workers (about half of its total labor force) have lost their jobs and meanwhile, several months of salary arrears are owed to the workers that are maintained (La Tribune Afrique, 2019). According to Business in Cameroon (2023), a new threat of shutdown is looming over the CDC after 5 workers of the company were killed in an attack

claimed by separatists on February 10, 2023 while 44 others were injured and rushed to a hospital in Tiko. The Guardian Post (2023) reported that the workers were returning from the plantation when gunmen ambushed and opened fire. Just when people thought the situation was under control and that peace was gradually returning, especially after the CDC was able to resume operations in some of its estates and projects, the new attack struck fear into workers again. Moreover, several workers of the company were attacked and traumatized by the separatist fighters; i.e., their fingers were cut-off, they were severely beaten and received persistent threats to stop work (Jeun Afrique, 2019). In this light, crisis management requires a critical consideration of SHRs with leadership styles. Thus, the place of leadership in the management of human resources is indispensable. Another serious management/leadership challenge faced by the CDC emanates from government regulation of the corporation's activities as a state-owned enterprise (CDC, 2018). As a result, the CDC is obliged to sell palm oil in the local market below its production cost; it is only the government that searches customers/clients for the CDC, and determines the types of goods to be manufactured or transformed. These external factors (i.e., the sociopolitical crisis, and government regulation) adversely affected the effective running of the CDC and its projects and could result to project failure because the workers and clients of the company were dissatisfied; and as such, posed numerous leadership/management challenges.

It is on the bases of the forgoing arguments that the study intends to find out if leadership styles can determine project success in the agro-industry.

1.2. Objectives of the Study

1.2.1. Main Objective

To determine whether leadership styles have a positive impact on project success in the agro-industry.

1.2.2. Specific Objectives

The specific objectives of our study were to:

1) Determine whether contingency leadership has a positive impact on project success in the agro-industry.

2) Determine whether democratic leadership has a positive impact on project success in the agro-industry.

3) Determine whether bureaucratic leadership has a positive impact on project success in the agro-industry.

1.3. Questions of the Study

1.3.1. General Question

What is the impact of leadership styles on project success in the agro-industry?

1.3.2. Research Questions

1) What is the impact of contingency leadership on project success in the agro-industry?

2) What is the impact of democratic leadership on project success in the agro-industry?

3) What is the impact of bureaucratic leadership on project success in the agro-industry?

1.4. Hypotheses of the Study

1.4.1. General Hypothesis

Leadership styles have a positive impact on project success in the agro-industry.

1.4.2. Research Hypotheses

1) Contingency leadership has a positive impact on project success in the agro-industry.

2) Democratic leadership has a positive impact on project success in the agro-industry.

3) Bureaucratic leadership has a positive impact on project success in the agro-industry.

2. Literature Review

This section is divided into two main sections; conceptual framework, theoretical framework, and appreciation of the literature. In the conceptual framework, we defined/explained key concepts, variables, and other related concepts with respect to the context of this study. The theoretical framework reviews theories that are related to our work.

2.1. Conceptual Framework

2.1.1. Leadership Styles

A leadership style is a leader's approach of providing direction, implementing plans, and motivating people (Al-Mahayreh et al., 2016). The first major study of leadership styles was performed in 1939 by Kurt Lewin who led a group of researchers to identify different styles of leadership (Lewin et al., 1939). This early research has remained quite influential as it established the three major leadership styles (U.S. Army Handbook, 1973) thus:

- **Authoritarian or autocratic leadership**—the leader tells his or her employees what to do and how to do it, without getting their advice. An autocratic leader wields power and control over decision-making. Besides this, they make unilateral decisions and expect their team members to follow them. Admittedly, this leadership style can be effective when quick and decisive action is required. On the other hand, it limits employee engagement and creativity.
- **Participative or democratic leadership**—the leader includes one or more employees in the decision-making process, but the leader normally maintains the final decision-making authority. In other words, democratic leaders value their team members' opinions. In brief, employees are involved in decision-making processes, and their ideas and standpoints are sought. Furthermore, a democratic leader promotes collaboration, teamwork, and employee engagement

by instilling a sense of owners.

• **Delegative or laissez-fair (free-rein) leadership**—the leader allows the employees to make the decisions, however, the leader is still responsible for the decisions that are made. In other words, a laissez-faire leader takes a more passive approach, allowing team members autonomy and freedom. Consequently, they believe in their employees' ability to make decisions and handle tasks independently. Because individuals can pursue their own approaches, this leadership style can foster creativity and innovation. But, if not managed properly, it can lead to a lack of direction or coordination.

Bureaucracy is another main leadership style. The bureaucratic leadership style was first described by Max Weber in 1947. It is based on following normative rules, and adhering to lines of authority. In other words, it is a system of management whereby employees are made to follow specific rules and lines of authority created by the superiors. Bureaucratic leaders function based on official regulations fixed by higher authorities within the organization (Management Study HQ, 2019). The characteristics of the bureaucratic leadership are stated thus: leaders impose strict and systematic discipline on the followers, and demand business-like conduct in the workplace; leaders are empowered via the office they hold: position power; followers are promoted based on their ability to conform to the rules of the office; followers should obey leaders because authority is bestowed upon the leader as part of their position in the company.

Several leadership styles have been identified by researchers (Müller & Turner, 2007, 2010) as follows:

Leadership based on contingency: This is an approach whereby the leader or project manager identifies features (i.e., internal and external factors) of the project and endeavors to adapt to them by utilizing a leadership style that fits best to the situation; examples: autocratic, consultative and collaborative/democratic leadership.

Leadership based on trait: The importance of this method is that the leader has personal characteristics that are necessary to lead/manage successfully; such as self-confidence, drive for responsibility and completing tasks, vigor and persistence to pursue goals, ability to take risks, initiative and solve problems. If the project manager possesses these traits, the project will likely be successful.

Leadership based on behavior or style: The importance of this leadership style or method is that different projects need different leadership styles; examples: directive, supportive, participative and achievement oriented leaderships. As such, the leaders or project managers should use the attributes that are required for a specific project and up to certain extents. A good example can be empowerment of subordinates/personnel through training.

Leadership based on charisma or vision: This is a complex leadership approach; it comprises two categories. The first category stresses on the importance of personal characteristics and leading by examples; like servant leaders who prioritize their team's needs and well-being; create a supportive environ-

ment in which people feel valued and appreciated; basically understand their team's concerns and provide guidance and resources to help them succeed by actively listening and empathizing; focus on developing their team's skills and talents, promoting a culture of collaboration and service to achieve collective goals. The second category (vision) stresses on the importance of achieving the plans through bonuses and reaction to deviations. Visionary leaders see the future clearly and compellingly; they effectively communicate their vision to their team, motivating them to work together to achieve common goals; they generate enthusiasm and a sense of purpose through their persuasive communication skills, encouraging innovation and creativity. Examples include transformational and transactional leaderships.

Leadership based on emotional intelligence: This approach is based on the assumption that the emotional intelligence enables project success than leadership style and as such, the leaders should focus on using their emotional intelligence when managing projects; for examples: responding positively to new initiatives, communicating effectively, being flexible, networking and socializing, giving emotional support, active listening, confronting on challenges, dressing and acting smartly, and helping others.

Leadership based on competency: This leadership style is based on the belief that an effective leader should possess certain competencies/skills and behaviors which contribute to higher performance and/or project success. Examples, skills for: organizational leadership (managing change, problem solving, risk taking and innovating); self-leadership (demonstrating ethics, integrity, drive and purpose, controlling the self); people leadership (communicating effectively, developing others, valuing diversity and differences, creating and maintaining relationships).

2.1.2. Project Management

Project Management has gained popularity as a distinct management concept used to drive not only business objectives, but also the economic development agenda of developing countries. For instance, several programs in Ghana, such as real estate development, event planning, product development, and infrastructure development, especially those tied to foreign aid from development partners, all lay heavy emphasis on the use of projects and project management as a tool to optimize the rate of success. According to Chatfield (2007), project management is the discipline of planning, organizing and managing resources to bring about the successful completion of specific project goals and objectives. Leadership is very important in project management because both leadership and project management are like two sides of the same coin; i.e., both leadership and project management go together because in the process of project management, a leadership approach is often used that can positively or negatively affect project success.

Projects: The knowledge of projects has broadened in the past century to a great extent. Projects were regarded as unique tasks (PMI, 2010), that should be

undertaken. According to the Project Management Institute (2008), projects are temporary endeavors conducted to meet unique goals and objectives within a defined scope, budget and time frame that typically pass through a life cycle. This was facilitated by two approaches such that projects may be referred to as temporary organizations (Lundin & Söderlund, 1995) and as strategic building blocks (Cleland, 1994). As a result of this development in contemporary times, Görög (2013) defines projects as "one-time, complex, unique sequence of activities carried out in a project organization with time, and budget constraints and they implement a definite output (project result)". From the above definition and the facilitated approach towards projects, the most essential aims of the project manager are to manage the implementation process of the project, temporary organization and deliver the beneficial change. This implies managing the stakeholders of the project, planning, accomplishing the plans and handing/delivering the output that was defined, in order to achieve project success. Furthermore, a project can be defined as possessing a defined beginning and end, specific, preordained goal or set of goals (performance expectations), location or geographical scope, series of complex or interrelated activities and a limited budget.

Project Success: Recently, project success has become very complex—it has an input and an output-oriented standpoint. The output-oriented standpoint assesses project success with the aid of success criteria. Görög (2013), referred to **success criteria** as those base values on which project success can be measured. The input-oriented standpoint evaluates projects from the position of which factors help to achieve project success in a greater extent. The factors are the **critical success factors (CSFs)**. CSFs are specific elements or action areas a business, team, or department must focus on and successfully implement to attain its strategic objectives. Successful implementation of the success factors should generate a positive outcome and create meaningful value for the business. CSFs are important because each one works as a road map for the organization. When they are explicitly clarified to everyone at the business, they function as a reliable point of reference for focus and for determining success (Center for Management and Organization Effectiveness, 2023). From the output perspective, the **project triangle** is an essential criterion to evaluate project success. This triangle (including time, cost and quality) evaluates the completion of the project from the standpoint of efficiency. But, because of the rapid changes of the environment and the instability, there is a need to analyze the project from the viewpoint of effectiveness (Judgev & Müller, 2005). This is a complex phenomenon that could be partitioned into two criteria: client satisfaction, stakeholder satisfaction. Client satisfaction comprises the realization of the underlying objective why the project was initiated. From the above, three important criteria could be identified against which a project could be assessed—project triangle (time, cost, quality), client satisfaction, and stakeholder satisfaction.

From the input perspective, **critical success factors (CSFs)** are those con-

cepts which enable us to assess project success. The development of critical success factors is more rapid than that of project success or success criteria (Judgev & Müller, 2005). Initially, they mainly emphasized on the project triangle, but later (because of the improvement of understanding project success) other factors began to receive higher importance (Fortune & White, 2006); such as ensuring the project management competencies or support of the senior management (Bryde, 2008; Chen & Chen, 2007; Fiedler, 2010; Ho et al., 2008; Papke-Shields et al., 2010). Fortune and White (2006) examined more than 60 publications and arrived at a conclusion that the most popular were: support of the senior management; clear, realistic objectives; good, up-to-date project plan; good communication/feedback; end-user involvement.

Many critical success factors were identified which can be classified in 9 categories (Cheung et al., 2009; Gelbard & Carmelli, 2009; Görög, 2008; Ng & Tang, 2010; Yang et al., 2011; Yu & Kwon, 2011) thus: clarity of the underlying strategic objective of the project; scope definition of the project; continuous communication amongst the project team members (including the user's involvement and the support of the senior management); reliability of the project triangle and the availability of the resources needed; competency of the project manager and his/her leadership style; competency of the project team and the team's motivation; risk management; change management; organizational and environmental characteristics.

Pinto and Slevin (1988), found 10 project success factors (see **Table 1**). This is one of the most widely cited lists.

Knowledge Areas: Project management knowledge areas are areas of expertise or specialization. Every project needs to have skills and knowledge in each of these areas (Esposito, 2015). There are ten Project Management knowledge areas (process groups) namely; integration, scope, time, cost, quality, human resources, communications, risk, procurement, and stakeholder management (PMI, 2013). There are activities from each of the ten knowledge areas under the planning process group. One knowledge area (project integration management) influences and is being influenced by all of the other knowledge areas. Four main knowledge areas (scope, time, cost, and quality) result to specific project objectives. Five facilitating or enabling knowledge areas (human resources, communication, risk, procurement, and stakeholder managements) are the means by which the project objectives are realized.

The Project Life Cycle: The project life cycle is a logical sequence of activities to achieve the project's goals which require effective leadership (PMI, 2008). There are typically eight phases which guide the project from start to finish. Each phase is peculiar and important in its own way and together they are ingenious to the success of the project thus:

1) Conceptualize: This is the first phase which is characteristic of the Vision or Dream that gives rise to the creation of the project. The Vision or Dream that sets in gives way for the validation of the project need which in turn gives rise to the Project Charter.

Table 1. Project success factors of Pinto and Slevin.

Success Factor	Description
1. Project Mission	Clearly defined goals and direction
2. Top Management Support	Resources, authority and power for implementation
3. Schedule and Plans	Detailed specification of implementation
4. Client Consultation	Communication with and consultation of all stakeholders
5. Personnel	Recruitment, selection and training of competent personnel
6. Technical Tasks	Ability of the required technology and expertise
7. Client Acceptance	Selling of the final product to the end users
8. Monitoring and Feedback	Timely and comprehensive control
9. Communication	Provision of timely data to key players
10. Troubleshooting	Ability to handle unexpected problems

Source: Pinto & Slevin, 1988.

2) Plan: Planning involves project management skills and techniques, cost and time evaluations, determination of quality expectations and specifications and gives rise to the Work Breakdown Structure.

3) Organize: Based on the work packages, estimations of cost and time and determination of resources and manpower, different functional teams will have to be organized. Work will have to be differentiated and distributed and a temporary project team will have to come into play headed by the project manager.

4) Implement: It is based upon the principle "Plan the work. Work the plan". In short, it means to carry out whatever has been planned. Everything that is included in the WBS will have to be implemented.

5) Control: The Control Phase may be part of any other practical phase as it involves monitoring for risks, issues and quality criteria.

6) Integration: Integration is a phase that implements and conforms to specifications (i.e., adjustments are made to conform to the predefined standards).

7) Delivery & Closeout: At this phase, all deliverables are met, the service or project is ready for use, contracts are terminated, the project team is dissolved, and all loose ends of the project are closed. The project in all its finesse is then handed over to the project sponsor.

8) Knowledge Leveraging: It is a documentation of all work done, or rather all phases (1 - 7) and considers all forms of registered documents and logs.

Impact: Impact is an effect that something has on a situation or person (Cambridge Advanced Learners Dictionary, 2005). Impact can be positive or negative; it can either increase or decrease, or remain constant.

2.2. Theoretical Framework

Scholars have exerted effort to classify leadership into various theories (Dulewicz & Higgs, 2003; Partington, 2003) as explained below.

2.2.1. The Great Man Theory

The great man theory of leadership was a popular 19th-century belief that leaders are born, not made. According to this theory, popularized by Scottish writer Thomas Carlyle in the 1840s, leaders are both born with leader characteristics and born out of social, political, or economic circumstance. Thus, it was the innate qualities of the individual that allowed for their rise to leadership positions. The middle of the 20th century saw this theory fall from favor as behavioral theories began to take over. However, some held onto this belief (Kane, 2014). The Great man theory is related to this study because it stresses that leaders are born with leadership skills, and out of a particular situation (such as economic, political, and social). In this regard, CDC, could commission workers or PMs who naturally possess leadership skills in particular social, economic and political situations that could be utilized to impact project success. For instances, PMs who born with leadership skills (i.e., naturally possess leadership traits) such as good communication skills, the ability to motivate people, the ability to negotiate and resolve problems are more likely to use these potentials to positively impact success criteria (such as cost and client satisfaction) and/or CSFs, hence resulting to project success.

2.2.2. The Trait Theory

The trait theory was popular up to the 1940s. The idea behind the theory is that effective leaders share common traits. A Trait can be defined as an inherent characteristic of a person while a competency can be defined as ability of capability of a person to do something (Kolektif, 1998). The trait theory like the great man theory effectively assumes that leaders are born, not made. Efforts to identify the traits of effective leaders have focused on three major areas:

- Abilities: hard management skills, problem solving ability, communication ability, technical knowledge;

- Personality: for instance, self-confidence, honesty and integrity, perspective, and emotional variables;

- Physical appearance: consisting size and appearance.

For example, the Achievement Motivation Theory of David McClellan attempts to explain and predict behavior and performance based on a person's need for achievement, power and affiliation. One of these three needs (achievement, power and affiliations) tend to be dominant in each of us, and motivates our behavior (McClelland, 1961). The trait theory is relevant to our work because it can explain the relationship that we were trying to test (i.e., the relationship between leadership styles and project success). This implies that the trait theory-proposition gives a direction which we found relevant to explain our work. Secondly, the theory is relevant to our work because it contains our variables and modalities. In this regard, a PM can use leadership style based on traits like hard management skills, technical knowledge, communication ability, and honesty and integrity to impact on project success. In addition, the Need Achievement Theory of David McClelland supposes that an effective leader

should have: a moderate need for achievement; an essential need for power; and a lower need for affiliation than power. In relation to our work, the PMs whose personality traits constitute: a moderate need for achievement, a high need for power, and the lower need for affiliation than power are more likely to utilize these traits to influence project success.

2.2.3. The Behavioral or Style Theory

The behavioral or style theory became popular from the 1940's to the 1960's. Its assumption was that effective leaders adopt some styles or behaviors. In effect, it states that effective leaders can be made. According to the behavioral approach to leadership, anyone who adopts the appropriate behavior can be a good leader. Researchers on leadership behavior who followed the behavior approach to leadership, attempted to uncover the behaviors in which leaders engage, rather than what traits a leader possesses (University of Pretoria, 2018). For example, Lewin and his associates conducted studies at Iowa State University that concentrated on leadership styles (Lewin et al., 1939; Likert, 1967). They identified the following leadership styles:

Autocratic leadership style—the leader makes the decisions, tells employees what to do and closely supervises workers.

Democratic leadership style—the leader encourages participation in decisions, works with employees to determine what to do and does not closely supervise employees.

In relation to our work, project managers can be trained to acquire leadership skills and to adopt the appropriate leadership behaviors or styles at various phases of the project life cycle. For examples, the project manager can be flexible to adopt the most suitable leadership style (such as democratic, autocratic, laissez-faire, bureaucratic) at a particular phase of a project.

2.2.4. The Contingency/Situational Theory

The contingency/situational theory became popular in the 1960's and 1970's (Fiedler, 1967; House, 1971; Krech, Crutchfield, & Ballachey, 1962; Robbins, 1997). Instead of searching universal theories of leadership which should apply in every situation, contingency/situational theories hold that what makes an effective leader should depend on the situation or circumstance. They tend to follow the same pattern as follows: 1) assess the characteristics of the leader; 2) assess the situation in terms of main contingency variables; 3) find a match between the leader and the situation.

For example, the Blake and Mouton's Managerial Grid (Blake & Mouton, 1964) is widely accepted as a critical and important analysis of leadership behavior. It is similar in some respects to the Ohio State Studies, which combined a focus on tasks and a focus on the relationship with the subordinate. However, the managerial grid develops these concepts further by quantifying the degree to which the focus is on tasks or "concern for production/results," and on the relationship with the subordinate or "concern for people." The Managerial Grid further supports the work of Hersey and Blanchard (1977), House and Aditya

(1997) and Vroom and Yetton (1973) on the situational theory of leadership. The 1 to 9 scale (see **Figure 1**) allows for discernment among the various responses regarding concern for production or people, where one represents a low concern and nine represents a high concern. Blake and McCanse (1991) postulated there were five leadership styles. The contingency/situational theory is relevant to our study because it explains the relationship that we were trying to test (i.e., the relationship between leadership styles and project success), provides the direction that we found relevant to explain our work and encourages the use of different leadership styles in various situations by PMs to impact on project success.

2.2.5. The Visionary/Integrative or Charismatic Theory

The theory became popular in the 1980's and 1990's, and originated from the study of successful business leaders who led their organizations through change. Charismatic leadership is basically the method of encouraging particular behaviors in others by way of eloquent communication, persuasion and force of personality. Charismatic leaders motivate followers to get things done or improve the way certain things are done. This is accomplished by conjuring up eagerness

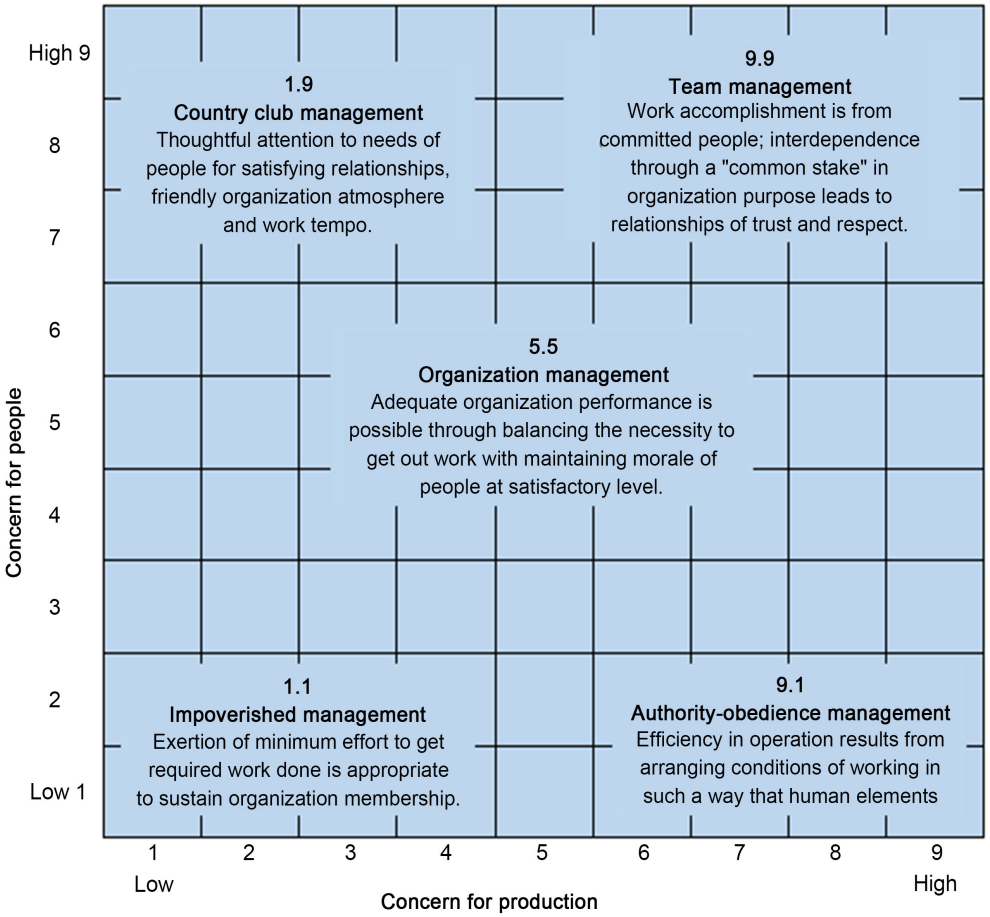

Figure 1. The managerial grid of Blake and Mouton. *Source*: Blake & Mouton (1964). *The Managerial Grid: The Key to Leadership Excellence*. Houston, TX: Gulf Publishing Company.

in others to achieve a stated goal or vision. In essence, the charismatic leadership style has its basis in a form of heroism. This leadership style is almost of divine origin. For example, Bass (1985) defines transformational leadership primarily in terms of the leader's impact on followers. Followers trust, admire and respect the leader, and they are therefore motivated to do more than what was originally expected. According to Bass (1985) a leader can transform followers by making them more aware of the importance and value of task outcomes; inducing them to transcend their own self-interest for the sake of the team; and activating their higher-order needs. The Charismatic theory is related to this study because a project manager can apply his charisma (such as convincing eloquence in communication, persuasion, force of personality and motivation of followers) to get things done in order to accomplish the objective(s) or goal(s) or vision of the project; thus, leading to project success.

2.2.6. The Emotional Intelligence Theory

This theory stresses on the ability of a person to understand and manage his own emotions, and those of the people around him. People with a high degree of emotional intelligence know what they are feeling, what their emotions imply, and how these emotions can affect other people (Mind Tools, 2019). The emotional intelligence school became popular since the late 1990's, and assumes that the emotional intelligence of a leader has a greater influence on his success as a leader—and the performance of his team—than his intellectual capability (Goleman et al., 2002).

Four dimensions of emotional intelligence have been identified (Goleman et al., 2002) (see **Table 2**), and, from there, six leadership styles, namely: the visionary, democratic, coaching, pacesetting, affiliative, and commanding leadership styles. Goleman et al. (2002) asserted that the first four of the leadership styles will foster resonance in the team, and often result to better performance in appropriate situations. The last two styles could foster dissonance, thus—although appropriate in the correct situations—they need to be used with care. They, as well as other researchers, have shown a clear correlation between the emotional intelligence and leadership style of managers and the performance of their organizations. The emotional intelligence theory has a relationship with this study because project managers with a high degree of emotional intelligence can understand and manage their emotions and those of others in some circumstances, and hence impact on project success.

2.2.7. The Competency Theory

Beginning from the late 1990's, the focus has been to find the competencies of effective leaders. The competency theory seems to be a return to the trait approach. But competencies could be learned, thus leaders could be made, not only born. Moreover, various combinations of competencies may result to various styles of leadership, appropriate in various situations, producing transactional leaders in circumstances of low complexity and transformational leaders in

Table 2. Domains of emotional intelligence.

Domains	Competencies
Personal Competence • Self-awareness	Emotional self-awareness Accurate self-awareness Self-confidence
• Self-management	Emotional self-control Transparency Adaptability Achievement Initiative Optimism
Social Competence • Social awareness	Empathy Organizational awareness Service
• Relationship management	Inspirational leadership Influence Developing others Change catalyst Conflict management Building bonds Teamwork and collaboration

Source: Goleman et al., 2002.

circumstances of the high complexity. After reviewing several studies (Alimo-Metcalfe & Alban Metcalfe, 2001; Bass & Avolio, 1995; Bennis, 1989; Goffee & Jones, 2000; Goleman et al., 2002; Kotter, 1990; Kouznes & Posner, 1998) and from their proper research, Dulewicz and Higgs (2003) discovered 15 leadership competencies. There are seven emotional (EQ), three intellectual (IQ) and five managerial (MQ) competencies (see **Table 3**). By tabulating their eight against those proposed by the other authors, they confirmed a strong agreement in the literature with their list. Other researchers have slightly fewer or slightly more factors. They combine some and split some, but there is a strong agreement with the list. This theory is related to our work because it is based on the assumption that leadership competencies could be learned, not only born. In this regard, project managers could be trained to acquire competencies which they could use appropriately to accomplish the goals of their project and as a result impact on project success.

2.3. Appraisal of the Literature

We can note that the leadership styles identified in the literature encompass elements of the task-lead and stakeholder-lead attitudes. The difference results from the degree of combination for adapting to an external situation, the project

Table 3. Fifteen leadership competencies and competence profiles of three leadership styles.

Group	Competency	Goal	Involving	Engaging
Intellectual (IQ)	1. Critical analysis and judgment	High	Medium	Medium
	2. Vision and Imagination	High	High	Medium
	3. Strategic Perspective	High	Medium	Medium
Managerial (M)	4. Engaging Communication	Medium	Medium	High
	5. Managing Resources	High	Medium	Low
	6. Empowering	Low	Medium	High
	7. Developing	Medium	Medium	High
	8. Achieving	High	Medium	Medium
Emotional (EQ)	9. Self-awareness	Medium	High	High
	10. Emotional Resilience	High	High	High
	11. Motivation	High	High	High
	12. Sensitivity	Medium	Medium	High
	13. Influence	Medium	High	High
	14. Intuitiveness	Medium	Medium	High
	15. Conscientiousness	High	High	High

Source: Dulewicz & Higgs, 2003.

team or subordinates, and the personal characteristics of the project manager/leader. The trait theory (similar to the great man theory because of their common standpoint that leaders are born) of leadership can be difficult to apply in modern day leadership because researchers have failed to come up with a list of traits that can be linked to good leadership practices. Extensive empirical studies have failed to establish the generalizability of these traits and thus it came into quick competition with other leadership theories. The trait theory and great man theory also discount or disregard learning and experience in leadership. We also noticed that there are similarities between the behavioral/style, contingency/situational, charismatic/visionary, competency and emotional intelligence theories due to their assumption that leaders are born and/or made and the fact that they appeal to or deal with emotions. In this vain, the behavioral/style theories focus on observations of what leaders actually do and it is on this ground that they are dismissed because obviously different leaders will utilize different leadership styles; however, style alone does not make a leader until it is matched with a situation. The contingency/situational theories bring relevance of factors within the environment (i.e., the external environment, the subordinates/followers and the personal characteristics of the leader) that determine the style of leadership practices and effectiveness. These theories would work well with the charismatic theories (e.g., transformational leadership theories) which emphasize on transforming people and organizations literally and changing their mindsets,

heart and spirit by broadening their vision, clarifying purpose to bring about permanent change that focuses on relations between the leader and the followers. Once this has been achieved, the two groups are then united in pursuance of higher goals.

Amongst the salient missing elements in the literature that we had to fill or investigate in this study were the following challenges:

• The impact of leadership styles on project success in the agro-industry in Cameroon. Most of the studies in the literature were foreign and not conducted in the agro-industry. They were undertaken in different countries but lack external validities in Cameroon and in the agro-industrial company like the CDC in particular. Although we found few studies (e.g., Nsom et al., 2019; Fokam, 2016) that were locally carried out on leadership in Cameroon, they were not directly connected to project success in the agro-industry; but were useful because they inspired us to do further research to fill this gap.

• The leadership style that should be used to influence project success-success criteria (e.g., time, cost, quality, etc.).

• The leadership style which should be used to influence project success-critical success factors (e.g., clarity of overall project mission and goals, top management support, team work, schedules and plans, etc.).

• The leadership style that is appropriate to influence project success at each stage of the project life cycle.

It is on the bases of the forgoing arguments that the study intends to find out if leadership styles can positively impact on project success in the agro-industry.

3. Research Methods

3.1. Research Design

Firstly, we used the exploratory case study design because the study was conducted in a single company. The exploratory case study design was employed with the goal to prove that further investigation in this study was necessary, and have a better understanding of the existing problem by using multiple research methods. Secondly, we also used the survey design. Survey is a research method of asking people about themselves through the use of questionnaires or interviews. We administered self-constructed questionnaires and interviews to a sample of 123 respondents. There are many reasons why surveys are used by researchers. For instance, Shaughnessy and Zechmeister (1990) assert that Campbell—in 1981 used surveys to study changes in the sense of people's satisfaction in several aspects of their lives.

However, one of the major shortcomings of surveys concerns the reactivity of subjects. Subjects are likely to make themselves look good in the eyes of the researchers by answering questions in a manner they feel will please them. In order to overcome the shortcomings of the survey, we had to be very tactful and careful enough in the manner in which we constructed our instrument and approached the participants. We also had to use document analysis and observa-

tion approach to overcome the loopholes of the survey. Thus, in order to achieve the objectives of our study, we used both primary and secondary sources of data. The primary sources of data were obtained from survey in the CDC; and secondary sources emanated from the library, internet researches and project documents.

Population and Sample: The target population of the study was over 22,036 employees of CDC. The accessible population was about 16,275 workers (personnel) from the: Department of Planning, Environment, Research and Quality (DPERQ) in CDC; Human Resources (HR); Group Rubber (GR); Group Banana (GB), Group Oil Palms (GOP); Information Systems Management (ISD); Technical Services; Logistics Department; Communications Department; Finance Department; Head Office Management Control (HOMC). According to the rule of sample size, the researcher should draw his sample between 10 - 20 percent of the accessible population (Cozby, 2001). But we could not respect this rule due to the conflict in the Anglophone regions that adversely affected the CDC resulting to the closure of several estates. In response to the above problem, we did our best out of the worse by conveniently drawing a sample size of 123 respondents/workers from the accessible population of 16,275 workers. The sample of 123 respondents was sufficient, since it depicted the project management structure of the company. We purposefully interviewed project managers and their assistants (e.g., directors, assistant directors, estate managers, agriculture unit managers, service heads/managers) as well as employees with knowledge and experience in project management. We also used stratified sampling by taking care to ensure the representation of the various backgrounds of respondents in the sample. Aspects such as age groups, gender/sex, position/function, longevity of service or working experience and department of workers were considered.

Instruments of Data Collection: In the process of collecting data, we used the triangulation method—the combination of methodologies in the study of the same phenomenon (Bowen, 2009). In order to seek convergence and corroboration, qualitative researchers often use at least two resources by using different data sources and methods. Our reason for triangulating was that it provides a confluence of evidence that breeds credibility (Bowen, 2009). Corroborating findings across data sets can reduce the impact of potential bias by examining information collected through different methods.

In this regard, we used a self-constructed questionnaire in the process of collecting data; copies of the questionnaire were administered to participants of the study in the company. In order to test the validity and reliability of our questionnaire, a tentative copy was administered to a very small sample in the CDC that enabled us to make necessary adjustments on the wordings and questions/items before constructing the final questionnaire. The reliability of the questionnaire was measured using Cronbach's Alpha reliability coefficient, through the use of the SPSS. The formula for calculating Cronbach's Alpha reliability coefficient is:

$$\alpha=\left(\frac{k}{k-1}\right)\left(1-\frac{\sum_{k-1}^{k}\sigma_{y_i}^2}{\sigma_x^2}\right)$$

where: k refers to the number of scale items;

$\sigma_{y_i}^2$ refers to the variance associated with item i;

σ_x^2 refers to the variance associated with the observed total scores.

The reliability or consistency of each of the three sub-scales (i.e., Leadership styles and project success—success criteria; Leadership styles and project success—critical success factors; Leadership styles and project success at different project types and stages) of the questionnaire were calculated and it yielded the alpha values in **Table 4** which are considered to be reliable; i.e., good, acceptable, and good respectively (see **Appendix B** for further details). We used questionnaires because they have several advantages (Cozby, 2001: p. 120; Kenya Projects Organization (KENPRO), 2012); especially the facts that they were less costly to be administered, and allowed our respondents to be completely anonymous since no identifying information (e.g. name, social security or driver's license number) was asked. Although very useful, we encountered one of the important disadvantages of self-administered questionnaires (Cozby, 2001: p. 120; Kenya Projects Organization (KENPRO), 2012). Many respondents found it boring to sit by themselves reading questions and then writing down answers. To overcome the above drawback of the questionnaires, we had to conduct personal or face-to-face interviews with some participants. This gave us an opportunity to explain the items to the participants which they could not understand.

We also used structured interviews, in which the wording of the questions and their sequence were the same from one interview to another in the CDC. The structure and content of the interview are the same as the self-constructed questionnaire. In this regard, we utilized the questionnaire as our interview guide in the process of interviewing the participants. The participants had to choose from a limited number of responses that had been written in advance. The persons who participated in the interview (based/dependent on their availability) were directors, estates and units' managers, service heads and workers with experience in project management. The main reason why we used this approach is because personal interviews or face-to-face interviews provide an opportunity for the researcher to explain/clarify questions to the participants which they do not understand.

Table 4. Reliability statistics of the Sub-scales of the questionnaire.

Variables	N of items	Cronbach's Alpha	Internal Consistency
Leadership styles and project success—success criteria	2	.887	Good
Leadership styles and project success—critical success factors	2	.730	Acceptable
Leadership styles and project success at different project types and stages	2	.891	Good

Source: Field study, 2018.

3.2. Setting

This research was undertaken to investigate the impact of leadership styles on project success in the agro-industry in Cameroon—precisely in the Cameroon Development Corporation (CDC) between the years 2017 and 2020. The CDC is an Agro-Industrial Complex that grows, processes and markets tropical export crops. It operates in Cameroon in the Central African sub-region. It is a parastatal company with current share capital of 35,718,806,000 FCFA, and its operations are coordinated by the General Manager and governed by a Board of Directors presided by a Chairman. Currently, its plantations cover a total of approximately 42,000 Hectares of land, 38,000 Hectares is mature and of production stage. The corporation constituted a workforce of over 22,036 employees, including temporary workers, making it the second highest employer after the state of Cameroon. Its major products include banana, semi-finished rubber, palm oil and palm kernel oil. The current General Manager of CDC, is Mr. Franklin Ngoni Njie.

3.3. Methods of Data Presentation and Analysis

We presented our data in tables. Both descriptive and inferential methods were used to analyze our data. Descriptive statistics (frequencies, percentages, and ranks) were used to analyze the data; meanwhile the chi-square statistic was applied to test and analyze the hypotheses. The chi-square statistic was used because it is commonly used for testing relationships between categorical variables.

3.4. Ethical Considerations

The primary responsibility for the conduct of ethical research lies with the researcher. It was our fundamental principle that we adopted a continuing personal commitment to act ethically, to encourage ethical behavior in those with whom we collaborated, and to consult where appropriate concerning ethical issues towards research participants and other researchers.

4. Results

In this section, the data that was collected from the company—CDC has been presented (in tables and charts/figures; the data in the tables was ranked in descending order of magnitude), analyzed and interpreted. We did descriptive analyses from subsections 4.1 to 4.3, meanwhile in subsection 4.4, we did inferential analyses by testing our hypotheses.

4.1. Leadership Styles and Project Success—Success Criteria

4.1.1. What Criteria Are Used in Your Company to Measure Project Success?

Table 5 represents success criteria used to measure project success by the sampled population of the company. It could be seen that, of all the 123 workers who responded to question 1a: 87.80 % (most) of them preferred quality as a success

criterion; 85.36% preferred cost; 74.79% preferred time; 71.54% preferred client satisfaction; and 56.09 % (minority) preferred stakeholder satisfaction. This implies that in order to determine the extent of project success in the company, quality should be the first criterion to be considered.

4.1.2. Which Leadership Style Should the Project Manager Use to Influence Each Criterion That You Ticked in Question 1a to Ensure Project Success?

Table 6 shows the leadership styles used to influence time by the sampled population of CDC. We can notice that, of all the 92 workers who responded to question 1b: 43.47% (majority) of them preferred leadership style based on contingency; 22.82% preferred leadership style based on trait; 14.13% preferred leadership style based on competency; 8.69% preferred leadership style based on behavior or style; 7.60% preferred leadership style based on charisma or vision; and 3.26% (minority/few) preferred leadership style based on emotional intelligence. Thus, leadership style based on contingency is the most preferred that could be used to influence time and as a result project success, when managing projects that engage the entire population of the company.

Table 5. Success criteria used to measure project success by the sample.

Criteria	Frequency			Percentage			Rank
	Positive response	Negative response	Total	Positive response	Negative response	Total	
Time	92	31	123	74.79	25.20	100.00	3
Cost	105	18	123	85.36	14.63	100.00	2
Quality	108	15	123	87.80	12.19	100.00	1
Client satisfaction	88	35	123	71.54	28.45	100.00	4
Stakeholder satisfaction	69	54	123	56.09	43.90	100.00	5

Source: Field study, 2018.

Table 6. Leadership styles to influence time by the sample.

Leadership style	Frequency	Percentage	Rank
Leadership style based on trait	21	22.82	2
Leadership style based on behavior/style	8	8.69	4
Leadership style based on contingency	40	43.47	1
Leadership style based on charisma/vision	7	7.60	5
Leadership style based on emotional intelligence	3	3.26	6
Leadership style based on competency	13	14.13	3
Total	**92**	**100.00**	

Source: Field study, 2018.

Table 7 reveals the leadership styles utilized to influence cost by the entire sample of CDC. It could be observed that, of all the 105 workers who responded to question 1b: 54.28% (majority) of them preferred leadership style based on contingency; 13.33% preferred leadership style based on trait; 11.42% preferred leadership style based on competency; 8.57% preferred leadership style based on charisma/vision; 6.66% preferred leadership style based on behavior/style; 3.80% preferred leadership style based on emotional intelligence; and 1.90% did not give any leadership style. This implies that, leadership style based on contingency is the most preferred which could be applied to impact cost and consequently project success, when managing projects involving the entire population of the CDC.

Table 8 presents the leadership styles which could be utilized to influence quality by the entire sample of CDC. Of the 108 workers who responded to question 1b with regards to quality, we observed that: 27.77% (majority) preferred leadership style based on competency; 16.66% preferred leadership style based on contingency; 15.74% preferred leadership style based on charisma/vision; 15.74% preferred leadership style based on behavior/style; 13.88% preferred leadership style based on trait; 7.40% preferred leadership style based on emotional intelligence; and 2.77% did not give any leadership style. Thus, leadership style based on competency was the main approach that could be used to influence quality and as a consequence project success.

Table 9 shows the leadership styles which could be used to influence client satisfaction by the entire sample of workers in CDC. Of the 88 workers who responded to question 1b with regards to client satisfaction, we realized that: 35.22% preferred leadership style based on emotional intelligence; 18.88% preferred leadership style based on behavior/style; 15.90% preferred leadership style based on contingency; 13.63% preferred leadership style based on trait; 12.50% preferred leadership style based on charisma/vision; 1.13% preferred leadership style based on competency; and 3.40% did not give any leadership style. This implies that leadership style based on emotional intelligence could be utilized to influence client satisfaction and as a result project success in the company.

Table 10 portrays the leadership styles which should be utilized to influence stakeholder satisfaction, according to the sampled population of workers in the CDC. Of the 69 workers who responded to question 1b with regards to stakeholder satisfaction, it was observed that: 26.08% preferred leadership style based on emotional intelligence; 15.94% preferred leadership style based on contingency; another 15.94% preferred leadership style based on behavior/style; 14.49% preferred leadership style based on trait; another 14.49% preferred leadership style based on charisma/vision; and 11.59% preferred leadership style based on competency. It implies that leadership style based on emotional intelligence could be applied to influence stakeholder satisfaction and consequently project success when managing projects which involve a fair or balanced representation of the various social groups in the company.

Table 7. leadership styles to influence cost by the sample.

Leadership style	Frequency	Percentage	Rank
Leadership style based on trait	14	13.33	2
Leadership style based on behavior or style	7	6.66	5
Leadership style based on contingency	57	54.28	1
Leadership style based on charisma/vision	9	8.57	4
Leadership style based on emotional intelligence	4	3.80	6
Leadership style based on competency	12	11.42	3
Leadership style not given	2	1.90	
Total	**105**	**100.00**	

Source: Field study, 2018.

Table 8. Leadership styles to influence quality by the sample.

Leadership style	Frequency	Percentage	Rank
Leadership style based on trait	15	13.88	4
Leadership style based on behavior or style	17	15.74	3
Leadership style based on contingency	18	16.66	2
Leadership style based on charisma/vision	17	15.74	3
Leadership style based on emotional intelligence	8	7.40	5
Leadership style based on competency	30	27.77	1
Leadership style not given	3	2.77	
Total	**108**	**100.00**	

Source: Field study, 2018.

Table 9. Leadership styles to influence client satisfaction by the sample.

Leadership style	Frequency	Percentage	Rank
Leadership style based on trait	12	13.63	4
Leadership style based on behavior or style	16	18.88	2
Leadership style based on contingency	14	15.90	3
Leadership style based on charisma/vision	11	12.50	5
Leadership style based on emotional intelligence	31	35.22	1
Leadership style based on competency	1	1.13	6
Leadership style not given	3	3.40	
Total	**88**	**100.00**	

Source: Field study, 2018.

Table 10. Leadership styles to influence stakeholder satisfaction by the sample.

Leadership style	Frequency	Percentage	Rank
Leadership style based on trait	10	14.49	3
Leadership style based on behavior or style	11	15.94	2
Leadership style based on contingency	11	15.94	2
Leadership style based on charisma/vision	10	14.49	3
Leadership style based on emotional intelligence	18	26.08	1
Leadership style based on competency	8	11.59	4
Leadership style not given	1	1.44	
Total	**69**	**100.00**	

Source: Field study, 2018.

4.2. Leadership Styles and Project Success—Critical Success Factors

4.2.1. What Factors (at Most 10) Do You Believe Are Critical to Achieve Project Success?

Table 11 presents a detailed information of factors which the workers of the company believed were critical to achieve project success. Of the 123 workers who responded to question 2a with regards to which factors they believed were critical to achieve project success, the following critical success factors were mentioned in order of preference:

- Effective communications, by 101 workers with a percentage score of 82.11%;
- Clarity of overall mission and goals, by 99 workers with a percentage score of 80.48%;
- Team work, by 99 workers with a percentage score of 80.48%;
- Realistic time and cost estimates, by 93 workers with a percentage score of 75.60%;
- Schedules and plans or well-laid out specifications, by 91 workers with a percentage score of 73.98%;
- Competency of project personnel, by 89 workers with a percentage score of 72.35%;
- Monitoring and feedback, by 89 workers with a percentage score of 72.35%;
- Technical tasks/appropriate technology, by 76 workers with a percentage score of 61.78%;
- Adequate resources, by 75 workers with a percentage score of 60.97%;
- Top management support, by 62 workers with a percentage score of 50.40%;
- Client satisfaction/acceptance, by 58 workers with a percentage score of 47.15%;
- Effective consultations with stakeholders, by 54 workers with a percentage score of 43.90%;
- Risk management, by 50 workers with a percentage score of 40.65%;

Table 11. Critical success factors.

Factor	Frequency			Percentage			Rank
	Positive response	Negative response	Total	Positive response	Negative response	Total	
Clarity of overall project mission and goals	99	24	123	80.48	19.51	100.00	2
Top management support	62	61	123	50.40	49.59	100.00	8
Schedules and plans/well-laid out specifications	91	32	123	73.98	26.01	100.00	4
Competency of project personnel	89	34	123	72.35	27.64	100.00	5
Effective consultations with stakeholders	54	69	123	43.90	56.09	100.00	10
Effective communications	101	22	123	82.11	17.88	100.00	1
Adequacy of contingency plan	28	95	123	22.76	77.23	100.00	16
Client involvement	31	92	123	25.20	74.79	100.00	14
Client satisfaction/ acceptance	58	65	123	47.15	52.84	100.00	9
Project manager's authority	29	94	123	23.57	76.42	100.00	15
Technical tasks or appropriate technology	76	47	123	61.78	38.21	100.00	6
Trouble shooting or Problem solving	49	74	123	39.83	60.16	100.00	12
Monitoring and feedback	89	34	123	72.35	27.64	100.00	5
Realistic time and cost estimates	93	30	123	75.60	24.39	100.00	3
Risk management	50	73	123	40.65	59.35	100.00	11
Adequate resources	75	48	123	60.97	39.02	100.00	7
Team work	99	24	123	80.48	19.51	100.00	2
External factors	22	101	123	17.88	82.11	100.00	17
Standards and regulations	45	78	123	36.58	63.41	100.00	13
Financing, and other	2	121	123	1.62	98.37	100.00	18

Source: Field study, 2018.

- Trouble shooting/problem solving, by 49 workers with a percentage score of 39.83%;
- Standards and regulations, by 45 workers with a percentage score of 36.58%;
- Client involvement, by 31 workers with a percentage score of 25.20%;

• Project manager's authority, by 29 workers with a percentage score of 23.57%;

• Adequacy of contingency plan, by 28 workers with a percentage score of 22.76%;

• External factors, by 22 workers with a percentage score of 17.88%;

• Financing and other, by 2 workers with a percentage score of 1.62%.

4.2.2. Which Leadership Style Will You Use to Influence Each Factor You Ticked in Question 2a (above) to Achieve Project Success?

Of the varying number of workers who responded to question 1b with regards to the leadership style they would use to influence each factor they mentioned in question 2a to achieve project success, it was observed that:

• Democratic leadership was the most solicited style to be used to impact ten CSFs, namely:

- effective communications (see Table 12);
- clarity of overall project mission and goals (see Table 12);
- team work (see Table 12);
- schedules and plans or well-laid out specifications (see Table 13);
- monitoring and feedback (see Table 13);
- client satisfaction or acceptance (see Table 13);
- effective consultations with stakeholders (see Table 13);
- trouble shooting or problem solving (see Table 13);
- client involvement (see Table 14);
- and external factors (see Table 14).

• Bureaucratic leadership was the most solicited style to be used to impact eight CSFs and others, namely:

- realistic time and cost estimates (see Table 15);
- competency of project personnel (see Table 15);
- technical tasks/appropriate technology (see Table 15);
- adequate resources (see Table 16);
- top management support (see Table 16);
- risk management (see Table 16);
- standards and regulations (see Table 16);
- adequacy of contingency plan (see Table 16);
- and other factors such as financing (see Table 16).

• Autocratic leadership was the most solicited style to be used to impact project manager's authority (see Table 17).

4.3. Leadership Styles and Project Success at Different Project Types and Stages

4.3.1. Can Different Leadership Styles Be Appropriate for Different Project Types and Stages?

Table 18 presents the responses on whether different leadership styles are appropriate for different project types and stages in CDC. Of the 123 workers who responded to question 3a, it was observed that: 106 responded "Yes" with a per-

centage score of 86.17%; 6 responded "No" with a percentage score of 4.87%; and 11 did not give any response with a percentage score of 8.94%. This implies that different leadership styles can be appropriate for different project types and stages in the company, thus to a certain extent confirming the assertion of Frame (1987).

4.3.2. Justify Your Answer

In response to question 3b, the following categories of justifications were given by the workers who responded "yes" and those who responded "no" (to question 3a with emphasis on whether or not different leadership styles can be appropriate for different project types and stages).

Table 12. Leadership styles to influence effective communications, clarity of overall project mission and goals, and team work.

Effective communications			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	7	6.93	3
Democratic	62	61.38	1
Autocratic	4	3.96	4
Bureaucratic	16	15.84	2
Other	1	.99	5
Leadership style not given	11	10.89	
Total	**101**	**100.00**	
Clarity of overall project mission and goals			
Laissez faire	2	2.02	5
Democratic	52	52.52	1
Autocratic	12	12.12	3
Bureaucratic	26	26.26	2
Other (leadership based on: emotional intelligence; company/project's objectives)	4	4.04	4
Leadership style not given	3	3.03	
Total	**99**	**100.00**	
Team work			
Laissez faire	4	4.04	4
Democratic	72	72.72	1
Autocratic	6	6.06	3
Bureaucratic	10	10.10	2
Other	1	1.01	5
Leadership style not given	6	6.06	
Total	**99**	**100.00**	

Source: Field study, 2018.

Table 13. Leadership styles to influence schedules and plans or well-laid out specifications, monitoring and feedback, client satisfaction/acceptance, effective consultations with stakeholders and troubleshooting/problem solving.

Schedules and plans or well-laid out specifications			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	2	2.19	4
Democratic	35	38.46	1
Autocratic	22	24.17	3
Bureaucratic	27	29.67	2
Other	1	1.09	5
Leadership style not given	4	4.39	
Total	**91**	**100.00**	
Monitoring and feedback			
Laissez faire	1	1.12	5
Democratic	29	32.58	1
Autocratic	24	26.96	3
Bureaucratic	27	30.33	2
Other (e.g., facilitative leadership)	2	2.24	4
Leadership style not given	6	6.74	
Total	**89**	**100.00**	
Client satisfaction/acceptance			
Laissez faire	4	6.89	3
Democratic	27	46.55	1
Autocratic	1	1.72	5
Bureaucratic	11	18.96	2
Other (e.g., transformational leadership)	2	3.44	4
Leadership style not given	13	22.41	
Total	**58**	**100.00**	
Effective consultations with stakeholders			
Laissez faire	3	5.55	4
Democratic	35	64.81	1
Autocratic	4	7.40	3
Bureaucratic	8	14.81	2
Other	1	1.85	5
Leadership style not given	3	5.55	
Total	**54**	**100.00**	

Continued

Trouble shooting/Problem solving			
Leadership Style/Competency	**Frequency**	**Percentage**	**Rank**
Laissez faire	1	2.04	5
Democratic	23	46.93	1
Autocratic	4	8.16	3
Bureaucratic	16	32.65	2
Other	2	4.08	4
Leadership style not given	3	6.12	
Total	**49**	**100.00**	

Source: Field study, 2018.

Table 14. Leadership styles to influence client involvement and external factors.

Client involvement			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	5	16.12	2
Democratic	22	70.96	1
Autocratic	1	3.22	4
Bureaucratic	2	6.45	3
Leadership style not given	1	3.22	
Total	**31**	**100.00**	
External factors			
Leadership Style/Competency	**Frequency**	**Percentage**	**Rank**
Laissez faire	1	4.54	3
Democratic	7	31.81	1
Bureaucratic	4	18.18	2
Other (e.g., leadership based on: behaviour/style; charisma/vision; inclusion)	7	31.81	1
Leadership style not given	3	13.63	
Total	**22**	**100.00**	

Source: Field study, 2018.

Table 15. Leadership styles to influence realistic time and cost estimates, competency of project personnel and technical tasks/appropriate technology.

Realistic time and cost estimates			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	1	1.07	5
Democratic	21	22.58	3
Autocratic	27	29.03	2
Bureaucratic	36	38.70	1
Other	2	2.14	4
Leadership style not given	6	6.45	
Total	**93**	**100.00**	

Continued

Competency of project personnel			
Laissez faire	3	3.37	5
Democratic	19	21.34	2
Autocratic	15	16.85	3
Bureaucratic	35	39.32	1
Other (e.g., leadership based on obligation)	9	10.11	4
Leadership style not given	8	8.98	
Total	**89**	**100.00**	
Technical tasks/appropriate technology			
Laissez faire	2	2.63	4
Democratic	6	7.89	3
Autocratic	13	17.10	2
Bureaucratic	40	52.63	1
Other (e.g., obligation, coaching)	6	7.89	3
Leadership style not given	9	11.84	
Total	**76**	**100.00**	

Source: Field study, 2018.

Table 16. Leadership styles to influence adequate resources, top management support, risk management, standards and regulations, adequacy of contingency plan, financing and other factors.

Adequate resources			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Democratic	23	30.66	2
Autocratic	8	10.66	3
Bureaucratic	29	38.66	1
Other	5	6.66	4
Leadership style not given	10	13.33	
Total	**75**	**100.00**	
Top management support			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	1	1.61	5
Democratic	22	35.48	2
Autocratic	5	8.06	3
Bureaucratic	25	40.32	1
Other (e.g., leadership based on emotional intelligence)	3	4.83	4
Leadership style not given	6	9.67	
Total	**62**	**100.00**	

Continued

Risk management			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Democratic	15	30	2
Autocratic	11	22	3
Bureaucratic	21	42	1
Other	1	2	4
Leadership style not given	2	4	
Total	**50**	**100.00**	
Standards and regulations			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	1	2.22	5
Democratic	6	13.33	3
Autocratic	13	28.88	2
Bureaucratic	19	42.22	1
Other	3	6.66	4
Leadership style not given	3	6.66	
Total	**45**	**100.00**	
Adequacy of contingency plan			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	1	3.57	3
Democratic	5	17.85	2
Autocratic	5	17.85	2
Bureaucratic	17	60.71	1
Total	**28**	**100.00**	
Financing and other factors			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Bureaucratic	1	50.00	1
Other	1	50.00	1
Total	**2**	**100.00**	

Source: Field study, 2018.

Table 17. Leadership styles to influence project manager's authority.

Leadership Style	Frequency	Percentage	Rank
Democratic	6	20.68	3
Autocratic	12	41.37	1
Bureaucratic	8	27.58	2
Other	1	3.44	4
Leadership style not given	2	6.89	
Total	**29**	**100.00**	

Source: Field study, 2018.

Table 18. The Appropriateness of different leadership styles for different project types and stages.

Response	Frequency	Percentage	Rank
Yes	106	86.17	1
No	6	4.87	2
Response Not Given	11	8.94	
Total	**123**	**100.00**	

Source: Field study, 2018.

Justifications for "Yes"

• It depends on the type of project and/or the stage/phase of the project. Each project type and stage comes with its own challenges (expected and unexpected); so, flexibility in leadership styles to adapt to unique circumstances will guarantee success. Leadership styles of managers of palms and rubber estates are different because the crops they work with are not perishable like banana. Adjustments should be made based on the type/stage of the project. Each stage and type of project has its own targets and different levels of people.

• Each project has its own peculiarity or specificity/uniqueness (e.g. an agro-chemical project has a different view compared to a car manufacturing project). The military may use an autocratic leadership while an agro-industrial sector will need a bureaucratic leadership.

• Different leadership styles will help boost performance and overall results of the project. Different leadership styles are important at different stages of the project; while bureaucracy gives the guiding rules, deviations are often necessary through dialogue for consensual results.

• Leadership is a human endeavor and the human being is flexible. You may start with democratic for instance and if things are not moving as planned, you may change to autocracy or bureaucracy.

• It depends on the audience/team; the function of the leaders; the followers; and the situation—plans are altered at times to match with the current situation (atmospheric, economic and social conditions).

• Projects are set up in different environments requiring different inputs at different levels which call for different leadership styles.

• It depends on the quality of the human resources, availability of finances, time constraints, availability of material resources and risks.

• There are projects with complex nature that require zero tolerance unlike others; resulting to different leadership styles. The complex nature of the project will determine the kind of leadership style you will employ.

• Different projects need various management approaches. There is no single style to lead various projects.

• People have different nature/personality and not everyone reasons the same.

• All projects do not have the same objectives.

• This will depend on stakeholder satisfaction.

• The dynamic nature of the factors involved in projects necessitate different leadership approaches.

• The success of a project depends on principles and dynamics of activities which come at various stages and which if missed out will cause a lot of damage.

• Innovations may occur in the course of the project. As the world evolves, things change and different technologies are discovered.

• Different approaches may yield different results at different intervals.

• A project that involves a 3rd party or non-in-house stakeholder will need a different leadership style from a self-owned project.

• Customs differ.

Justifications for "No"

• The leadership style that you start with, it is good to end with it.

• Each leadership is appropriate to a project type.

• Projects are not always the same. Project understanding must be done to help you know the leadership style to be used.

• Leadership style must be different to suit the nature of a project and the condition of the project to give results.

Source: Field study, 2018.

From the above responses, one could observe that most of the responses were rather in favor for yes (that different leadership styles can be used for different project types and stages); even the respondents who gave reasons/justifications why they said no really wanted or had to say yes.

4.3.3. Which Leadership Style Is Appropriate to Influence Project Success at Each of the Following Eight Stages of the Project Life Cycle?

Of the 123 workers who responded to question 4 concerning the appropriate leadership style to influence project success at each of the eight stages of the project life cycle, it was observed that:

• **At the conception stage** (see Table 19), 54 (most) respondents suggested democratic leadership with a percentage score of 43.90%. Thus, democracy is the most appropriate leadership style to influence project success at the conception phase in CDC.

• **At the planning stage** (see Table 19), 60 (most) respondents suggested democratic leadership style with a percentage score of 47.78%.This implies that democracy is the most appropriate leadership style to influence project success at the planning phase of the project life cycle in the corporation.

• **At the organizing stage** (see Table 20), 51(most) suggested bureaucratic leadership style with a percentage score of 41.46%. This shows that bureaucracy is the most appropriate leadership style to influence project success at the organizing phase of the project life cycle.

• **At the implementation stage** (see Table 20), 46 (most) respondents suggested autocratic leadership style with a percentage score of 37.39. Therefore, autocracy is the most appropriate leadership style to influence project success at the implementation phase of the project life cycle.

Table 19. Leadership styles and project success at the conception and planning stages.

Project Success at Conception Stage			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	14	11.38	4
Democratic	54	43.90	1
Autocratic	21	17.07	3
Bureaucratic	26	21.13	2
Other (e.g., visionary leadership, leadership based on behavior/style)	4	3.25	5
Leadership style not given	4	3.25	
Total	**123**	**100.00**	
Project Success at Planning Stage			
Democratic	60	48.78	1
Autocratic	12	9.75	3
Bureaucratic	41	33.33	2
Other (e.g., cross cultural leadership, leadership based on behavior/style)	3	2.43	4
Leadership style not given	7	5.69	
Total	**123**	**100.00**	

Source: Field study, 2018.

Table 20. Leadership styles and project success at the organizing, implementation, control, integration, delivery and closeout stages.

Project Success at organizing stage			
Leadership Style	**Frequency**	**Percentage**	**Rank**
Laissez faire	3	2.43	5
Democratic	44	35.77	2
Autocratic	13	10.56	3
Bureaucratic	51	41.46	1
Other (e.g., leadership based on competence, cross cultural leadership)	6	4.87	4
Leadership style not given	6	4.87	
Total	**123**	**100.00**	
Project Success at implementation stage			
Laissez faire	1	.81	5
Democratic	26	21.13	3
Autocratic	46	37.39	1
Bureaucratic	32	26.01	2
Other (e.g., leadership based on competence; behaviour/style)	5	4.06	4
Leadership style not given	13	10.56	
Total	**123**	**100.00**	

Continued

Project Success at control stage			
Laissez faire	1	.81	5
Democratic	21	17.07	3
Autocratic	52	42.27	1
Bureaucratic	41	33.33	2
Other	3	2.43	4
Leadership style not given	5	4.06	
Total	**123**	**100.00**	
Project success at integration stage			
Laissez faire	3	2.43	5
Democratic	32	26.01	3
Autocratic	40	32.52	1
Bureaucratic	39	31.70	2
Other (e.g., leadership based on behavior/style)	4	3.25	4
Leadership style not given	5	4.06	
Total	**123**	**100.00**	
Project Success at delivery & closeout stage			
Laissez faire	2	1.62	5
Democratic	27	21.95	2
Autocratic	15	12.19	3
Bureaucratic	68	55.28	1
Other (e.g., leadership based on: competence; behavior/style)	5	4.06	4
Leadership style not given	6	4.87	
Total	**123**	**100.00**	

Source: Field study, 2018.

• **At the control stage** (see Table 20), 52 (most) suggested autocratic leadership with a percentage score of 42.27%. It implies that autocracy is the most appropriate leadership style to influence project success at control stage of the project life cycle in the organization.

• **At the integration stage** (see Table 20), 40 (most) suggested autocratic leadership with a percentage score of 32.52%. Therefore, autocracy is the most appropriate leadership style to influence project success at the integration phase of the project life cycle in the CDC.

• **At the delivery and closeout stage** (see Table 20), 68 (most) respondents suggested bureaucratic leadership with a percentage score of 55.28%. It means that bureaucracy is the most appropriate leadership style which can influence project success at the delivery and closeout stage of the projects in the organiza-

tion.

• **At the knowledge leveraging stage** (see Table 21), 69 (most) suggested bureaucratic leadership with a percentage score of 56.09%. It implies that the bureaucratic leadership is the most appropriate style can influence project success at the knowledge leveraging phase of projects in the organization.

4.4. Hypotheses Testing

The Chi-square (χ^2) statistic was used to test the three null and research/alternate hypotheses of the study at .05 significance level. The formula for calculating chi-square is: $\chi^2 = \Sigma(O - E)^2/E$; where O is the observed frequency in each cell, E is the expected frequency in each cell, and the symbol Σ refers to summing over all cells.

The formula for calculating the expected frequencies for each of the cells is: E = Row total × Column total/N; where the row total refers to the row total for the cell (i.e. each cell) and the column total refers to the column total for the cell.

In order to obtain Chi-square critical or tabular value, we used the following formula to calculate the degree of freedom (df): df = $(R - 1)$ $(C - 1)$; where: R is the number of rows in the table; and C is the number of columns in the table. Each of the hypotheses was tested as analyzed below.

Hypothesis 1

H_{01}: No impact exists between contingency leadership and project success.

H_{R1}: Contingency leadership has a positive impact on project success in the agro-industry.

Based on questions 1a and 1b of our questionnaire, the χ^2 calculated/obtained value (total quantity for all cells—numbered 1-35) i.e., $\Sigma(O - E)^2/E = 141.91$ (see Table C1 at Appendix C). The degree of freedom (df) = 24 and the χ^2 critical/tabular value = 36.42.

Since the Chi-square calculated value (141.91) is greater than the critical/tabular value (36.42) of Chi-square at .05 significance level, we rejected the null hypothesis and confirmed the research hypothesis. Hence, contingency leadership has a positive impact on project success in the agro-industry.

Table 21. Leadership styles and project success at the knowledge leveraging stage.

Leadership Style	Frequency	Percentage	Rank
Laissez faire	6	4.87	4
Democratic	29	23.57	2
Autocratic	9	7.31	3
Bureaucratic	69	56.09	1
Other	3	2.43	5
Leadership style not given	7	5.69	
Total	**123**	**100.00**	

Source: Field study, 2018.

Hypothesis 2

H_{02}: No impact exists between the democratic leadership style and project success.

H_{R2}: Democratic leadership has a positive impact on project success in the agro-industry.

Based on questions 2a and 2b from our questionnaire, the χ^2 calculated/obtained value (total quantity for all cells—numbered 1-120) i.e., $\sum(O - E)^2/E = 482.93$ (see Table C2 at Appendix C). The degree of freedom (df) = 95 and the χ^2 critical/tabular value = 118.75.

Since the Chi-square calculated value (482.93) is greater than the critical/tabular value (118.75) of Chi-square at .05 significance level, we rejected the null hypothesis and confirmed the research hypothesis. Thus, democratic leadership has a positive impact on project success in the agro-industry.

Hypothesis 3

H_{03}: No impact exists between bureaucratic leadership and project success.

H_{R3}: Bureaucratic leadership has a positive impact on project success in the agro-industry.

Based on question 4 of the questionnaire, the χ^2 calculated/obtained value (total quantity for all cells—numbered 1-48) i.e., $\sum(O - E)^2/E = 2275.82$ (see Table C3 at Appendix C). The degree of freedom (df) = 35 and the χ^2 critical/tabular value = 49.81.

Since the Chi-square calculated value (2275.82) is greater than the critical/tabular value (49.81) of Chi-square at .05 significance level, we rejected the null hypothesis and confirmed the research hypothesis. Therefore, bureaucratic leadership has a positive impact on project success in the agro-industry.

The results of the study are summarized in Table 22.

Table 22. Hypotheses testing and results.

Hypotheses	Chi-square (χ^2)	Significance Level	Decision	Conclusion
H_{01}: No impact exists between contingency leadership and project success.	calculated = 141.91	.05	H_{01} rejected	Contingency leadership has a positive impact on project success in the agro-industry.
HR1: Contingency leadership has a positive impact on project success in the agro-industry.	critical = 36.42		H_{R1} confirmed	
H_{02}: No impact exists between the democratic leadership style and project success.	calculated = 482.93	.05	H_{02} rejected	Democratic leadership has a positive impact on project success in the agro-industry.
H_{R2}: Democratic leadership has a positive impact on project success in the agro-industry.	critical = 118.75		H_{R2} confirmed	
H_{03}: No impact exists between bureaucratic leadership and project success.	calculated = 2275.82	.05	H_{03} rejected	Bureaucratic leadership has a positive impact on project success in the agro-industry.
HR3: Bureaucratic leadership has a positive impact on project success in the agro-industry.	critical = 49.81		H_{R3} confirmed	

Source: Field Study, 2018.

5. Discussion

In this section, the results are discussed by insightfully interpreting the relationships between leadership styles and project success; the implications and limitations of the study are discussed, and further research is suggested. The conclusions stipulate the decisions that were taken regarding the hypotheses of the study.

5.1. Discussion

The first hypothesis of the study was designed to determine whether contingency leadership has a positive impact on project success in the agro-industry. In order to assess project success or failure, we had to determine the success criteria. In this regard, we identified project success criteria that strengthen and confirm the results of previous research (Project Management Institute, 2013; Görög, 2008, 2013; Cooke-Davies, 2002). The results indicate that contingency leadership has a positive impact on project success in the agro-industry. That is, leadership style based on contingency is the most preferred leadership that can be used by the PMs to influence project success (i.e., most of the identified project success criteria e.g., time, cost, and quality). This is one of the new information or knowledge that we acquired in our study. In this regard, the leader can select the most appropriate leadership style based on a particular situation and environmental factor. This is consistent with Western (European and American) studies (House, 1971; Blake & Mouton, 1964; Hersey & Blanchard, 1977; House & Aditya, 1997; Vroom & Yetton, 1973), studies conducted in sub-Sahara Africa (Musekura, 2013; Zimbango, 2013; Nsom et al., 2019), and in Asia (Jiang, 2014; Khan et al., 2014; Kureshi, 2013).

The meanings of the above results could be that contingency leadership is the most preferred style that should be used by the PMs to impact project success—success criteria of time, cost, and quality (often referred to as the project triangle). Here, the contingent PM can use three styles of leadership behaviors; which are bureaucratic, persuasive and consultative to impact on project success. In this regard, by being bureaucratic, the PM endeavors that workers follow rules and procedures accurately and consistently, professional managers gain instant authority, and that workers are remunerated on their capacity to perfectly respect rules and procedures. Also, the contingent PM can use the persuasive behavior to convince and motivate people (e.g., the clients, workers, sponsors/donors, and the government) that the decisions arrived at are good for them and the organization. With respect to the consultative behavior, the PM may confer with the stakeholders (such as clients, workers, donors and the government) of the organization before taking decisions and consider their advice and feelings when framing/making decisions.

However, although leadership style based on emotional intelligence was found to influence both clients and stakeholders satisfaction and consequently project success, contingency leadership can be applied as well to impact both clients and

stakeholders satisfaction. In this light, when managing clients and stakeholders of the organization, the contingent PMs can use bureaucratic, persuasive, and consultative styles (e.g., by involving, consulting and motivating through persuasion and giving of contingent rewards to the clients and employees) to ensure clients and stakeholders satisfaction, hence impacting project success.

The second hypothesis was also formulated to determine whether democratic leadership has a positive impact on project success in the agro-industry. In an effort to further determine what constitute project success, we found critical success factors (CSFs) that are essential for assessing project success. The identified CSFs strengthen and confirm those in the works of other researchers (Fiedler, 2010; Ng & Tang, 2010; Papke-Shields et al., 2010; Cheung et al., 2009; Gelbard & Carmelli, 2009; Bryde, 2008; Görög, 2008; Ho et al., 2008; Chen & Chen, 2007; Fortune & White, 2006; Yang et al., 2011; Yu & Kwon, 2011; Pinto & Slevin, 1987). In this light, we got knew information and knowledge by realizing that democratic leadership has a positive impact on project success in the agro-industry. This concurs with previous studies (Al Khajeh, 2018; Dolly & Nonyelum, 2018; Allafchi, 2017; Blaskovics, 2014; Sharma & Singh, 2013; Foels et al., 2000). In other words, the democratic leadership style was found to impact project success in the company by influencing most CSFs (e.g., clarity of overall project mission and goals, top management support, team work, schedules and plans, etc.).

The third hypothesis of the research was also interested to verify whether bureaucratic leadership has a positive impact on project success in the agro-industry. Bureaucratic leadership was found to influence some of the identified CSFs to achieve project success. This implies that, although the PMs should mostly use the democratic style of leadership to influence the CSFs, they should also consider bureaucratic leadership to impact some CSFs. In this light, bureaucracy is the most solicited leadership style which should be practiced to influence the following CSFs and consequently project success: realistic time and cost estimates; competency of project personnel; adequacy of contingency plan; adequate resources; and top management support.

The results reveal that bureaucratic leadership has a positive impact on project success in the agro-industry (at stages of the project life cycle). These results are similar to those identified in earlier studies (Matte, 2017; Palar & Cansoy, 2017; Idrus & Fatchur Rohman, 2015; Rouzbahani et al., 2013). In other words, we noted that bureaucracy is the most appropriate leadership style that impacts project success at most stages of the project life cycle in the company. This is another new information and knowledge that we acquired on the field. This implies that the PM should consider using the bureaucratic leadership to impact project success, especially at the organizing, delivery and closeout, and knowledge leveraging phases of the project life cycle. This can be practiced by applying bureaucratic principles; such as the respect for rules and regulations or procedures; division of labor; respect for hierarchy; the use of professional managers (i.e., specialist or expert managers) who gain instant authority; and rewarding

those who respect rules and procedures.

But, despite the fact that bureaucratic leadership has a greater impact on project success in the stages of the project life cycle, we also realized that democratic leadership is the most appropriate style to impact project success at the conception and planning phases of the project life cycle. Meanwhile, autocratic leadership is most suitable to impact project success at the implementation, control, and integration phases of the project life cycle; however, bureaucratic leadership can also be used to impact project success at the above three stages because project managers have instant authority.

5.2. Implications of the Study

5.2.1. Implications to Theory

This study will enable leaders (e.g., project managers, business managers, rulers, heads of government—a major stakeholder of the CDC) and readers to learn or acquire more knowledge on leadership and project success. In this case, leaders can acquire new information concerning the various leadership theories and styles that exist, how the theories and leadership styles are related or similar to one another, and what project success means. For example, readers will see that contingency leadership, behavior/style leadership, charismatic/visionary leadership are similar because of their proponents' belief that leadership is born or learned.

The study can help leaders and readers to know the new relationships that have been established between leadership styles and project success in the agro-industry. For instance, readers will be able to learn that contingency leadership impacts on project success—success criteria.

5.2.2. Implications to Policy and Practice

This study can be applied by leaders (e.g., project managers, business managers, administrators, rulers, heads of government) through the use of appropriate leadership styles to impact project success in organizations. In this vain, contingency leadership can be applied by the PM in the following situations to impact project success:

- **When managing time**; the bureaucratic, persuasive, and consultative styles may be used to ensure proper time schedules, respect for timelines and making necessary modifications due to external factors like weather conditions.
- **When managing finances/cost**; the bureaucratic, persuasive, and consultative styles can be practiced to identify and persuade project sponsors or sources of finance, and make realistic budgeting and cost estimates.
- **When managing quality**; the bureaucratic, and consultative styles could be utilized in order to formulate quality assurance standards and regulations, and ensure that the standards are strictly implemented and respected.

The study will help democratic leadership to be applied by the PMs/leaders to achieve project success (i.e., CSFs) in the following ways:

- **When managing communication**, democratic leadership can be used to

achieve effective communications in the organization. This can be done in consultation of the stakeholders by organizing regular meetings with them and considering their suggestions.

• **When handling issues concerning the project mission and goals**, democratic leadership could be used to influence clarity of the overall project mission and goals in the organization. In this case, the PMs can organize meetings to explain the project mission and goals where stakeholders will be given the opportunity to ask questions and receive answers regarding the overall project mission and goals.

• **In the process of managing teams** assigned for various tasks in a project, democracy can be applied to ensure team work or spirit in the organization. This could be realized by allowing team members to choose whom to work with and what task each will perform.

• **In the process of planning the activities of the project**, democracy is the most solicited leadership style that could be utilized to influence schedules and plans or well-laid out specifications and consequently project success. Here, team members can be consulted to give proposals regarding the question: who will do what, where, when and for whom?

• **During the monitoring and evaluation process**, democratic leadership is the most appropriate style that can be utilized to impact effective monitoring and feedback. This can be realized by often consulting the various stakeholders to get their opinions on how the project is evolving and whether or not it meets their expectations.

• **When managing the clients**, democratic leadership can be applied to influence client satisfaction/acceptance aswellas client involvement. In this case, the democratic PM can consult the clients, negotiate with the clients and as well motivate them by considering their demands.

• **When managing or dealing with the stakeholders** of the corporation, the most popular leadership style that can be utilized to influence effective consultations with the stakeholders is democratic leadership. The stakeholders here include the customers/clients, the employees, the government, and donors/sponsors. Thus, the PMs need to use democratic approaches by meeting regularly with the stakeholders and considering their suggestions so as to ensure effective communication with stakeholders.

• **To manage external factors** (such as the separatist attacks, and government regulation), democratic leadership is the most appropriate style that can be practiced to influence the said factors in the desired manner in the organization. The democratic PM can negotiate with the government to allow the company to look for her customers directly and to freely undertake investment projects for the transformation of its produce into finished products.

The study will enable PMs to be able to assess the impact of their leadership styles on project success or failure by using the identified project success criteria and CSFs. They can do this by verifying for instance whether clients, workers and other stakeholders are satisfied or not, whether there is team work or not

etc.

The study could encourage leaders such as project managers, business managers, administrators, rulers, and heads of government to take training courses on leadership and project management.

The study could stimulate further research in leadership and project success in the agro-industry and the other industries. The study could be replicated in the same industry to test its internal validity or in different industries to test its external validity.

5.2.3. Implications to Organizational Psychology

This study will help the individual leader/manager within an organization to learn/know how to take a first step into Project Management and Organizational Psychology. When the leader first ventures into Project Management, s/he needs to understand that s/he is working with people, driving projects, and influencing without authority. The success of the project will depend on how the project team is led. The skill sets on the Organizational Psychology side will equip the leader to build teams spirit/work. Being able to recognize strengths and guide self-assessment can produce the right people for the right role, and ultimately result to successful project outcomes and continued sponsorship.

The study will also enable Organizational psychologists to be conversant with knowledge in project management; i.e., to gain good knowledge in projects (often regarded as temporary organizations) especially in project management knowledge areas. Project management knowledge areas are the essential competencies which organizational psychologists must develop when engaged in project management or in the leadership of projects. There are ten knowledge areas in Project Management which include; time management, cost management, quality management, human resources management, communications management, risk management, and stakeholder management, etc.

5.3. Limitations of the Study

Not all the questionnaires that we intended to administer were distributed due to the conflict in the English-speaking regions (also referred to as the Anglophone regions) of Cameroon where our case study—CDC is located. The company installations and personnel were being attacked regularly by the separatist fighters called "Amba boys"; as a result, several estates of the company were forced to temporarily shut down. In addition, we would have visited more CDC offices and estates to have a larger and more representative sample of the company, but we did not have enough resources to do so. In response to the above setbacks, we braved the odds and managed to administer 200 questionnaires, but only 123 were returned.

Not all forms of companies operating in the agriculture industry were studied; for instance, we could not assess sole proprietors, partnerships, and private limited companies due to financial limitations. However, we encouraged further research to be carried out in those types of companies that were not studied by

us.

We could only generalize the findings of this study with some reservation by stating that leadership styles have a positive impact on project success in the agro-industry in Cameroon. The reservation is that the study was conducted only in one agro-industrial. Hence, the results cannot be generalized without reservations because they are limited to the type/form of companies operating in the agro-industry and having similar characteristics as the CDC. As a response to this obstacle, further research was suggested to be conducted in more agro-industrials.

5.4. Further Research

Future research on leadership styles and project success should be undertaken including comparative studies to analyse: male-based projects with female-based projects; male project managers with female project managers; projects based on young people with projects based on elderly people; and young project managers with elder project managers.

Further research should also include analyzing more corporations in the agro-industry with different features.

A comparative study should comprise analyzing organizations operating in different industries such as telecoms, education and public works.

5.5. Conclusion

All the following research hypotheses were tested and confirmed:

- Contingency leadership has a positive impact on project success in the agro-industry.
- Democratic leadership has a positive impact on project success in the agro-industry.
- Bureaucratic leadership has a positive impact on project success in the agro-industry.

From the above findings, we can conclude with some reservations that leadership styles have a positive impact on project success in the agro-industry in Cameroon. The reservation is that the study was conducted only in one agro-industrial. Hence, the results are limited to the type/form of companies operating in the agro-industry and having similar characteristics as the CDC.

5.6. Recommendations

To the CDC and similar companies, contingency leadership should be applied with Industrial/Organizational Psychology to impact project success; in this vain, the management should persuade the government of Cameroon (a major stakeholder of the CDC) to exert effort to resolve the ongoing conflict that is adversely affecting the company's projects. Secondly, democratic leadership should be applied to impact project success. Thirdly, bureaucratic leadership should be applied to impact project success.

To the government of Cameroon, she should continue to exert effort to find ways and means especially through inclusive dialogue with the separatist leaders to resolve the ongoing conflict that is badly affecting the CDC's projects and stakeholders (government, employees, customers).

Acknowledgements

Research is essentially team work. I truly appreciate all the valuable contributors who assisted me in the realization of this work.

I thank the management of CDC for permitting me to conduct research in the company; and all the employees of CDC who cooperated with me. In this direction, my special thanks go to: the General Manager (GM) of the CDC, Mr. Franklin Ngoni Njie; Mr. Henry Ikome Becko, Director of Human Resources; the staff of the Department of Planning, Environment, Research and Quality (DPERQ) especially Dr. Stephen N. Namijo, Director of DPERQ, Mr. Engemise Paul Mondoa, Acting Director of DPERQ and Technical Adviser to the GM, Hon. Efite Andrew, Research Coordinator, Mm. Engemise Noela, Strategic Planning Officer, Mr. Evelle Robert, Manager of Quality Management Systems, and Mr. Yang Edmond, Manager of Environment, Hygiene and Safety; Mr. Elias K. Ewusi, Civil Engineer, Technical Department; Mr. Elangwe Hermann, Acting Head Office Management Controller; Mm. Carr Christiana Etondi, Insurance Service Manager; the staff of Group Rubber (GR) especially Mr. Kube Donald, the Director; and Mm. Fih Felicia Tamanjong, Pests and Diseases Control Officer; the staff of Group Oil Palms (GOP) especially Mr. Dissoh Hell Zachee, the Director, and Mr. Engemise Bertrand; the staff of Group Banana (GB) notably Mr. Ekamba Edwin, Agriculture Quality Manager; Dr. Mbua Christophe Parr, Research Manager; Mr. Moudioh, Agriculture Unit Manager.

I thank my siblings; Diobe Didacus, Nsuane Jacintha, Asue Prosper, Elume Elvis, and Nzo Godlove for their moral, spiritual and financial support.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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Appendix A. The Contingency Table

Variables	Modalities	Indicators
Independent Variable: Leadership styles	Contingency leadership	Flexibility in the use of leadership styles; leadership style used depends on the match between the leader's subordinate factors (e.g., locus of control, experience, perceived ability) and the situation or environmental factors (e.g., task structure, formal authority system or position power, leader-member relations, social climate like strikes and wars, and weather condition).
	Democratic leadership	The leader facilitates organizational activities in consultation with the stakeholders (e.g., organizing meetings and listening to people's problems/complaints, considering people's complaints and suggestions, convincing people through the power of persuasion, negotiating and bargaining); group members can choose whom to work with and what task each will perform.
	Bureaucratic leadership	People are assigned to do tasks within their domain of competence; rules and regulations or procedures are strictly respected; there is strict respect for hierarchy; recruitment of professional managers and specialists/experts; granting instant authority to the professional managers; and those who respect rules and procedures are rewarded.
	Autocratic leadership	All group activities are organized and directed by the leader.
	Laissez-faire leadership	Avoiding to make decisions, abdicating responsibility, nonuse of authority.
	Competency leadership	Intellectual (IQ) (e.g., critical analysis and judgement, vision and imagination, strategic perspective); Managerial (MQ) (e.g., engaging communication, managing resources, empowering, developing, achieving); Emotional (EQ) (e.g., self-awareness, emotional resilience, motivation, sensitivity, influence, intuitiveness, conscientiousness).
	Behavior leadership	Concern 0for people or relationships, concern for production, use of authority, involvement of the team in decision making, involvement of the team in decision taking, flexibility versus the application of rules.
	Trait leadership	Problem solving ability, honesty and integrity, self-confidence, energy and initiative, communication, negotiating ability, technical knowledge, results orientation, perspective.
	Emotional intelligence leadership	Self-awareness (e.g., self-confidence, accurate self-awareness, emotional self-awareness), self-management (e.g., emotional self-control, transparency, adaptability, achievement, initiative, optimism), social awareness (e.g., empathy, organizational awareness, service), relationship management (e.g., team work and collaboration, building bonds, conflict management, developing others, change catalyst, influence).

Continued

	Charismatic leadership	Transactional (e.g., contingent rewards, management by exception), transformational (e.g., exhibition of charisma, inspirational motivation, individualized consideration, intellectual stimulation), servant (e.g., empowering followers to exercise leadership in accomplishing the organization's goals; leaders lead without dominating or controlling followers; leaders and followers work together in a mutually supportive environment in order to achieve organizational goals).
	Success criteria	Time (e.g., respect for time and deadlines), cost (e.g., working according to the estimated cost/budget), quality (e.g., respecting the quality standards/specifications), client satisfaction, stakeholder satisfaction.
Dependent Variable: Project success	Critical success factors	Effective communications, clarity of overall mission and goals, team work, realistic time and cost estimates, schedules and plans or well-laid out specifications, competency of project personnel, monitoring and feedback, technical tasks or appropriate technology, adequate resources, top management support, client satisfaction or acceptance, effective consultations with stakeholders, risk management, troubleshooting or problem solving, standards and regulations, client involvement, project manager's authority, external factors (sociopolitical crisis e.g., war, strike actions; government regulation).

Source: Field study, 2018.

Appendix B. Reliability of Questionnaire

Leadership styles and project success—success criteria

Table B1. Reliability statistics.

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	N° of Items
.887	.897	2

Table B2. Item statistics.

	Mean	Std. Deviation	N°
What criteria are used in your company to measure project success?	4.02	.930	123
Which leadership style should the project manager use to influence each criterion that you ticked in question 1a to ensure project success?	4.00	1.144	123

Table B3. Inter-Item correlation matrix.

	What criteria are used in your company to measure project success?	Which leadership style should the project manager use to influence each criterion that you ticked in question 1a to ensure project success?
What criteria are used in your company to measure project success?	1.000	.814
Which leadership style should the project manager use to influence each criterion that you ticked in question 1a to ensure project success	.814	1.000

Table B4. Item-Total Statistics.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
What criteria are used in your company to measure project success?	4.00	1.308	.814	.662	.
Which leadership style should the project manager use to influence each criterion that you ticked in question 1a to ensure project success?	4.02	.865	.814	.662	.

Leadership styles and project success—critical success factors

Table B5. Reliability statistics.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N° of Items
.730	.735	2

Table B6. Inter-Item correlation matrix.

	What factors do you believe are critical to achieve project success?	Which leadership style will you use to influence each factor you ticked in question 2a to achieve project success?
What factors do you believe are critical to achieve project success?	1.000	.581
Which leadership style will you use to influence each factor you ticked in question 2a to achieve project success?	.581	1.000

Table B7. Item-Total statistics.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
What factors do you believe are critical to achieve project success?	4.02	.764	.581	.338	.
Which leadership style will you use to influence each factor you ticked in question 2a to achieve project success?	3.81	1.021	.581	.338	.

Leadership styles and project success at different project types and stages

Table B8. Reliability statistics.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N° of Items
.891	.897	2

Table B9. Inter-Item correlation matrix.

	Can different leadership styles be appropriate for different project types and stages?	Which leadership style is most appropriate to each of the following 8 stages of the project life cycle?
Can different leadership styles be appropriate for different project types and stages?	1.000	.812
Which leadership style is most appropriate to each of the following 8 stages of the project life cycle?	.812	1.000

Table B10. Item-Total statistics.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Can different leadership styles be appropriate for different project types and stages?	3.94	1.170	.812	.660	.
Which leadership style is most appropriate to each of the following 8 stages of the project life cycle?	4.09	.856	.812	.660	.

Appendix C. Hypotheses Testing

Table C1. Leadership styles and project success—success criteria.

Leadership Styles	Project Success					Row totals
	Time	Cost	Quality	Client Satisfaction	Stakeholder Satisfaction	
Leadership style based on trait	$O_1 = 21$ $E_1 = 14.33$	$O_2 = 14$ $E_2 = 16.36$	$O_3 = 15$ $E_3 = 16.83$	$O_4 = 12$ $E_4 = 13.71$	$O_5 = 10$ $E_5 = 10.75$	72
Leadership style based on behavior or style	$O_6 = 8$ $E_6 = 11.74$	$O_7 = 7$ $E_7 = 13.40$	$O_8 = 17$ $E_8 = 13.79$	$O_9 = 16$ $E_9 = 11.23$	$O_{10} = 11$ $E_{10} = 8.81$	59
Leadership style based on contingency	$O_{11} = 40$ $E_{11} = 27.87$	$O_{12} = 57$ $E_{12} = 31.81$	$O_{13} = 18$ $E_{13} = 32.72$	$O_{14} = 14$ $E_{14} = 26.66$	$O_{15} = 11$ $E_{15} = 20.90$	140
Leadership style based on charisma/vision	$O_{16} = 7$ $E_{16} = 10.75$	$O_{17} = 9$ $E_{17} = 12.27$	$O_{18} = 17$ $E_{18} = 12.62$	$O_{19} = 11$ $E_{19} = 10.28$	$O_{20} = 10$ $E_{20} = 8.06$	54
Leadership style based on emotional intelligence	$O_{21} = 3$ $E_{21} = 12.74$	$O_{22} = 4$ $E_{22} = 14.54$	$O_{23} = 8$ $E_{23} = 14.96$	$O_{24} = 31$ $E_{24} = 12.19$	$O_{25} = 18$ $E_{25} = 9.55$	64
Leadership style based on competency	$O_{26} = 13$ $E_{26} = 12.74$	$O_{27} = 12$ $E_{27} = 14.54$	$O_{28} = 30$ $E_{28} = 14.96$	$O_{29} = 1$ $E_{29} = 12.19$	$O_{30} = 8$ $E_{30} = 9.55$	64
Not given	$O_{31} = 0$ $E_{31} = 1.79$	$O_{32} = 2$ $E_{32} = 2.04$	$O_{33} = 3$ $E_{33} = 2.10$	$O_{34} = 3$ $E_{34} = 1.71$	$O_{35} = 1$ $E_{35} = 1.34$	9
Column totals	92	105	108	88	69	N = 462

Source: Field Study, 2018.

Table C2. Leadership styles and project success—critical success factors.

Project Success	Leadership Styles						Row totals
	Laissezfaire	Democratic	Autocratic	Bureaucratic	Other	Not given	
Clarity of overall project mission and goals	$O_1 = 2$ $E_1 = 3.10$	$O_2 = 52$ $E_2 = 38.81$	$O_3 = 12$ $E_3 = 14.90$	$O_4 = 26$ $E_4 = 30.13$	$O_5 = 4$ $E_5 = 4.14$	$O_6 = 3$ $E_6 = 7.73$	99
Top management support	$O_7 = 1$ $E_7 = 1.94$	$O_8 = 22$ $E_8 = 24.31$	$O_9 = 5$ $E_9 = 9.33$	$O_{10} = 25$ $E_{10} = 19.31$	$O_{11} = 3$ $E_{11} = 2.59$	$O_{12} = 6$ $E_{12} = 4.82$	62
Schedules and plans/well laid out specifications	$O_{13} = 2$ $E_{13} = 2.85$	$O_{14} = 35$ $E_{14} = 35.68$	$O_{15} = 22$ $E_{15} = 13.70$	$O_{16} = 27$ $E_{16} = 26.69$	$O_{17} = 1$ $E_{17} = 3.80$	$O_{18} = 4$ $E_{18} = 7.10$	91
Competency of project personnel	$O_{19} = 3$ $E_{19} = 2.79$	$O_{20} = 19$ $E_{20} = 34.89$	$O_{21} = 15$ $E_{21} = 13.40$	$O_{22} = 35$ $E_{22} = 27.08$	$O_{23} = 9$ $E_{23} = 3.72$	$O_{24} = 8$ $E_{24} = 6.95$	89
Effective consultations with stakeholders	$O_{25} = 3$ $E_{25} = 1.69$	$O_{26} = 35$ $E_{26} = 21.17$	$O_{27} = 4$ $E_{27} = 8.13$	$O_{28} = 8$ $E_{28} = 16.43$	$O_{29} = 1$ $E_{29} = 2.26$	$O_{30} = 3$ $E_{30} = 2.21$	54
Effective communications	$O_{31} = 7$ $E_{31} = 3.17$	$O_{32} = 62$ $E_{32} = 39.60$	$O_{33} = 4$ $E_{33} = 15.20$	$O_{34} = 16$ $E_{34} = 30.73$	$O_{35} = 1$ $E_{35} = 4.22$	$O_{36} = 11$ $E_{36} = 7.88$	101
Adequacy of contingency plan	$O_{37} = 1$ $E_{37} = .87$	$O_{38} = 5$ $E_{38} = 10.97$	$O_{39} = 17$ $E_{39} = 8.52$	$O_{40} = 3$ $E_{40} = 2.21$	$O_{41} = 0$ $E_{41} = 1.17$	$O_{42} = 0$ $E_{42} = 2.18$	28
Client involvement	$O_{43} = 5$ $E_{43} = .97$	$O_{44} = 22$ $E_{44} = 12.15$	$O_{45} = 1$ $E_{45} = 4.66$	$O_{46} = 2$ $E_{46} = 9.43$	$O_{47} = 0$ $E_{47} = 1.29$	$O_{48} = 1$ $E_{48} = 2.42$	31
Client satisfaction (acceptance)	$O_{49} = 4$ $E_{49} = 1.82$	$O_{50} = 27$ $E_{50} = 22.74$	$O_{51} = 1$ $E_{51} = 8.73$	$O_{52} = 11$ $E_{52} = 18.07$	$O_{53} = 2$ $E_{53} = 2.42$	$O_{54} = 13$ $E_{54} = 4.52$	58

Continued

Project manager's authority	$O_{55} = 0$ $E_{55} = .91$	$O_{56} = 6$ $E_{56} = 11.37$	$O_{57} = 12$ $E_{57} = 4.36$	$O_{58} = 8$ $E_{58} = 8.82$	$O_{59} = 1$ $E_{59} = 1.21$	$O_{60} = 2$ $E_{60} = 2.26$	29
Technical tasks (appropriate technology)	$O_{61} = 2$ $E_{61} = 2.38$	$O_{62} = 6$ $E_{62} = 29.80$	$O_{63} = 13$ $E_{63} = 11.44$	$O_{64} = 40$ $E_{64} = 23.13$	$O_{65} = 6$ $E_{65} = 3.18$	$O_{66} = 9$ $E_{66} = 5.93$	76
Trouble shooting (Problem solving)	$O_{67} = 1$ $E_{67} = 1.53$	$O_{68} = 23$ $E_{68} = 19.21$	$O_{69} = 4$ $E_{69} = 7.37$	$O_{70} = 16$ $E_{70} = 14.91$	$O_{71} = 2$ $E_{71} = 2.05$	$O_{72} = 3$ $E_{72} = 3.82$	49
Monitoring and feedback	$O_{73} = 1$ $E_{73} = 2.79$	$O_{74} = 29$ $E_{74} = 34.89$	$O_{75} = 24$ $E_{75} = 13.40$	$O_{76} = 27$ $E_{76} = 27.08$	$O_{77} = 2$ $E_{77} = 3.72$	$O_{78} = 6$ $E_{78} = 6.95$	89
Realistic time and cost estimates	$O_{79} = 1$ $E_{79} = 2.92$	$O_{80} = 21$ $E_{80} = 36.46$	$O_{81} = 27$ $E_{81} = 14.00$	$O_{82} = 36$ $E_{82} = 28.30$	$O_{83} = 2$ $E_{83} = 3.89$	$O_{84} = 6$ $E_{84} = 7.76$	93
Risk management	$O_{85} = 0$ $E_{85} = 1.57$	$O_{86} = 15$ $E_{86} = 19.60$	$O_{87} = 11$ $E_{87} = 7.52$	$O_{88} = 21$ $E_{88} = 15.21$	$O_{89} = 1$ $E_{89} = 2.09$	$O_{90} = 2$ $E_{90} = 3.90$	50
Adequate resources	$O_{91} = 0$ $E_{91} = 2.35$	$O_{92} = 23$ $E_{92} = 29.40$	$O_{93} = 8$ $E_{93} = 11.29$	$O_{94} = 29$ $E_{94} = 22.82$	$O_{95} = 5$ $E_{95} = 3.14$	$O_{96} = 10$ $E_{96} = 5.85$	75
Team work	$O_{97} = 4$ $E_{97} = 3.10$	$O_{98} = 72$ $E_{98} = 38.81$	$O_{99} = 6$ $E_{99} = 14.90$	$O_{100} = 10$ $E_{100} = 30.13$	$O_{101} = 1$ $E_{101} = 4.14$	$O_{102} = 6$ $E_{102} = 7.73$	99
External factors	$O_{103} = 1$ $E_{103} = .69$	$O_{104} = 7$ $E_{104} = 8.62$	$O_{105} = 0$ $E_{105} = 3.31$	$O_{106} = 4$ $E_{106} = 6.69$	$O_{107} = 7$ $E_{107} = .92$	$O_{108} = 3$ $E_{108} = 1.71$	22
Standards and regulations	$O_{109} = 1$ $E_{109} = 1.41$	$O_{110} = 6$ $E_{110} = 17.64$	$O_{111} = 13$ $E_{111} = 6.77$	$O_{112} = 19$ $E_{112} = 13.69$	$O_{113} = 3$ $E_{113} = 1.88$	$O_{114} = 3$ $E_{114} = 3.51$	45
Financing, and other	$O_{115} = 0$ $E_{115} = .06$	$O_{116} = 0$ $E_{116} = .78$	$O_{117} = 0$ $E_{117} = .30$	$O_{118} = 1$ $E_{118} = .60$	$O_{119} = 1$ $E_{119} = .08$	$O_{120} = 0$ $E_{120} = .15$	2
Column totals	39	487	187	378	52	97	N = 1242

Source: Field Study, 2018.

Table C3. Leadership styles and project success at stages of the project life cycle.

Project success	**Leadership styles**						**Row totals**
	Laissez-faire	Democratic	Autocratic	Bureaucratic	Other	Not given	
Conception	$O_1 = 14$ $E_1 = 3.75$	$O_2 = 54$ $E_2 = 36.62$	$O_3 = 21$ $E_3 = 26$	$O_4 = 26$ $E_4 = 45.87$	$O_5 = 4$ $E_5 = 4.12$	$O_6 = 4$ $E_6 = 6.62$	123
Planning	$O_7 = 0$ $E_7 = 3.75$	$O_8 = 60$ $E_8 = 3.62$	$O_9 = 12$ $E_9 = 26$	$O_{10} = 41$ $E_{10} = 45.87$	$O_{11} = 3$ $E_{11} = 4.12$	$O_{12} = 7$ $E_{12} = 6.62$	123
Organizing	$O_{13} = 3$ $E_{13} = 3.75$	$O_{14} = 44$ $E_{14} = 3.62$	$O_{15} = 13$ $E_{15} = 26$	$O_{16} = 51$ $E_{16} = 45.87$	$O_{17} = 6$ $E_{17} = 4.12$	$O_{18} = 6$ $E_{18} = 6.62$	123
Implementation	$O_{19} = 1$ $E_{19} = 3.75$	$O_{20} = 26$ $E_{20} = 3.62$	$O_{21} = 46$ $E_{21} = 26$	$O_{22} = 32$ $E_{22} = 45.87$	$O_{23} = 5$ $E_{23} = 4.12$	$O_{24} = 13$ $E_{24} = 6.62$	123
Control	$O_{25} = 1$ $E_{25} = 3.75$	$O_{26} = 21$ $E_{26} = 3.62$	$O_{27} = 52$ $E_{27} = 26$	$O_{28} = 41$ $E_{28} = 45.87$	$O_{29} = 3$ $E_{29} = 4.12$	$O_{30} = 5$ $E_{30} = 6.62$	123
Integration	$O_{31} = 3$ $E_{31} = 3.75$	$O_{32} = 32$ $E_{32} = 3.62$	$O_{33} = 40$ $E_{33} = 26$	$O_{34} = 39$ $E_{34} = 45.87$	$O_{35} = 4$ $E_{35} = 4.12$	$O_{36} = 5$ $E_{36} = 6.62$	123
Delivery and closeout	$O_{37} = 2$ $E_{37} = 3.75$	$O_{38} = 27$ $E_{38} = 3.62$	$O_{39} = 15$ $E_{39} = 26$	$O_{40} = 68$ $E_{40} = 45.87$	$O_{41} = 5$ $E_{41} = 4.12$	$O_{42} = 6$ $E_{42} = 6.62$	123
Knowledge leveraging	$O_{43} = 6$ $E_{43} = 3.75$	$O_{44} = 29$ $E_{44} = 3.62$	$O_{45} = 9$ $E_{45} = 26$	$O_{46} = 69$ $E_{46} = 45.87$	$O_{47} = 3$ $E_{47} = 4.12$	$O_{48} = 7$ $E_{48} = 6.62$	123
Column totals	30	293	208	367	33	53	N = 984

Source: Field Study, 2018.