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Project leadership in the oil and gas industry: The case for path-goal leadership theory

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ABSTRACT

Project leadership is still an active research topic. In the oil and gas industry, mega projects cost millions of dollars to execute, and project delays can lead to avoidable losses when exemplary leadership behaviour is adopted. The challenges impacting project performance can be resolved through efficient and effective leadership. The cost of project financing increases with delays in project completion, reducing project cost-benefit value, and escalated exposure of the environment to more damages from project activities. Eighty-two case studies in the literature were reviewed, and the salient attributes of project success were outlined. From the findings, we advocate for a leadership structure that recognizes the unique roles of project leadership with more emphasis on enhancing the team's effectiveness, hence Path-Goal Leadership. This study is premised on the oil and gas industry because it is currently the major driver of the Nigerian economy; hence effective project leadership can save the nation huge costs from project delays in this sector.

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Introduction

Oil and gas industry project leaders demand strong leadership skills because the projects are usually large in scope and demand overseeing large and sub-unit teams (Krahn & Hartment, 2006). Although studies in organizational leadership have spanned over a century (Northouse, 2019), project leadership is recent and still an active field of study. Projects are unique and temporary and demand project leadership with the required skill(s) and experience (PMI, 2017). This will provide the needed drive for project completion within the stipulated time, scope, and budget. Another significant aspect of projects is that they drive change in organisations, implying that the adopted leadership must harness the available human resources to resolve all uncertainties arising from defining the project scope, goals, and objectives. The PMI has described the internal and external enterprise environmental factors (EEFs) that influence project activities (PMI, 2017). In this paper, the EEFs discussed are internal because they relate to leadership and employee capability.

The challenges of project leadership encompass team members' competencies throughout the project's duration – from inception to closure (Kloppenborg & Petrick, 1999). The PMI defines project leadership as "...the knowledge, skills, and behaviours needed to guide, motivate, and direct a team..." (PMI 2017, p. 56). Here, the leadership influence on the team includes guiding, motivating, and directing a team. The daily schedules of a project leader can consist of fixing and attending team performance review meetings, problem-solving, meetings with clients and contractors, internal and external communications audit sessions, and scheduled and unscheduled travels (Atesmen, 2015; Kaulio, 2008). The PMI also listed project leadership capabilities to include "negotiation, resilience, communication, problem-solving, critical thinking, and interpersonal skills" (PMI 2017, p. 60). Consequently, the right leadership behaviour for project success must be identified to match leadership characteristics with that of the team. This study advocates for unique project leadership roles that can enhance team effectiveness. So, the project manager is tasked mainly with

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budgetary and transactional leadership issues, while the project leadership focuses more on improving the effectiveness of the team to achieve cohesiveness and the needed drive for high performance.

Effective and efficient project leadership competencies are demanded to overcome project challenges. This is because delays in project completion can increase organisational expenditures through the need for additional financing. Again, delays can increase the cost-to-benefit (CBR) ratio, reduce project value, and increase the exposure of the environment to continuous damage and possible litigations. All these can negatively impact the corporate image. Delays can also reduce funding inflow from funding bodies since key performance indicators (KPIs) are assessed at milestone completions. A study conducted by Ruqaishi and Bashir (2015) concluded that poor definition of scope, incompetence of the workforce, demotivation among team members can result from non-payment for the jobs completed, poor leadership behaviour can lead to lack of ownership of the schedule by team members, poor productivity, poor incentives, inadequate organisational structure, and negative effect of social and cultural factors are all causes of delay in the project. Cobb (2012) stated that it is important to address project-related challenges, especially at the initiation, planning, launch, execution, and closing stages; thus, a competent project leader is required. Consequently, project leadership demands changes throughout the project's life cycle (Kloppenborg & Petrick, 1999). The emphasis of project leadership behaviour studied in this paper is on the execution phase.

An oil and gas industry project team comprises a multi-skilled workforce with interdisciplinary competencies (Kerzner, 2017). Hence, the project team defines the project leadership and management structure. To sustain performance, the team's activities must be controlled by the leadership (Atesmen, 2015). With the changing global dynamics in the workplace in the 21st-century project, leadership behaviour must be matched with the prevailing 21st-century work culture (Lloyd-Walker & Walker, 2011). For instance, it has been reported that millennials prefer jobs that align with their personalities and can enhance their ability to handle leadership roles (Gallup, 2016; Umuteme, 2020). This paper aims to advocate for a study that investigates the relatedness of P-G leadership theory in enhancing project delivery in the oil and gas industry. Accordingly, the oil and gas industry is capital intensive; thus, delays in project delivery due to poor leadership skills can lead to loss of revenue and reputation. Hence, it is important to emphasise the behaviour of project leaders in a team-working environment to realize the potential of every team member. The analysis of the theoretical findings of this study will focus on the roles of project leadership and how these roles are well suited to the P-G leadership theory.

This study builds on the adopted methodology which includes: (i) an exhaustive study of related literature on leadership theories that have been adopted in project leadership, (ii) eighty-two case studies of project administration in the literature (Atesmen, 2015), were studied, and the salient attributes of project success were outlined, (iii) previous leadership styles adopted in projects were compared side by side with the attributes of P-G leadership theory based on the project characteristics defined in the literature (PMI, 2017). From the findings, we advocate for a leadership structure that recognizes the unique roles of project leadership with more emphasis on enhancing the team's effectiveness.

The next section reviews related literature on leadership with an emphasis on identifying the leadership models suited for project leadership; the findings from the literature will follow this; after that, a discussion section advocating for P-G leadership behaviours will be provided; followed by a concluding section.

Literature Review

This literature review section aims to provide the theoretical and practical basis for defining the right leadership approach in a project environment in the oil and gas industry. We commence with a theoretical and conceptual background to the review. This was followed by a detailed discussion of previous studies on expected project leadership behaviour. The review was completed with a section that discusses the attributes of effective project leadership.

Theoretical and Conceptual Background

A documented study of project management from eighty-two (82) case studies and the lessons learned reveals that poor project leadership is the most influencing factor in project failure (Atesmen, 2015). This provides the basis for studying the characteristics of project leadership. Several theoretical approaches provide extensive knowledge of what leadership entails in the literature. However, studies on leadership from the 1960s focused on achieving the common goal through the change process and the influence of leaders on their subordinates (Northouse, 2019). In the definition posited by Blake and Mouton (1981), leadership influence was associated with problem-solving, productivity, employees' job satisfaction, and creativity. This is essential to project success and aligns with the direction of this study. Therefore, we define project leadership as the art and science of executing and completing a project by harnessing the people's capabilities in a team amidst business uncertainties and change.

Project Leadership Behaviour

As evident from a search in Google Scholar from 2012 to 2022, project leadership as an active field of study returned over 2 million related publications as of the 9th of June 2022. However, there is no consensus among the extant literature on the best leadership approach in project management. Thus, this study is exploratory because it examines project leadership as a theory that is still developing. A project team comprises both a multi-skilled and interdisciplinary workforce in the oil and gas industry (Kerzner, 2017), which increases the uncertainties in leading the team for top quartile performance. To ensure effective teamwork in the 21st century,

project leadership behaviour must align with the current work culture (Lloyd-Walker & Walker, 2011). The diverse work culture in the 21st century requires leadership that provides an enabling environment for team-building (Dyer Jr et al., 2013). The project leader can improve the team-building spirit in the project team by understanding the nature of the social and political interactions within the team (Zaccaro & Klimoski, 2001) and how this can positively impact the effectiveness of the team (Rego et al., 2016). Krahn and Hartment (2006) suggest that project delivery positively relates to a robust people-focused leadership approach and significantly depends on the existing organisational culture. The organisational culture defines the leadership approach, and since the team's effectiveness can be determined within a cross-cultural framework, it equally means that the leadership approach must align with the team's dominant cross-cultural domain. Therefore, a strong emphasis on a leadership approach that ensures the team's compliance with the organizational culture's norms and aligns with the team's cross-culture is appropriate for effective project leadership. According to Margules (2011), six leadership styles are essential in project delivery: i) visionary leadership, providing long-term direction, ii) affiliative leadership to achieve human-oriented leadership, iii) participative leadership, creating and builds commitment and innovation-driven spirit, iv) coaching leadership, for improving team members' competencies, v) pacesetter leadership, enhancing achievement-oriented performance, and vi) directive leadership, ensuring compliance, and high project quality and delivery.

In this paper, the above six leadership styles discussed in Margules (2011) will be compared with the characteristics of some selected leadership styles in the literature, including the P-G leadership theory. Previous studies on project performance have investigated the impact of *transformational* (e.g., Grill, Nielsen, Grytnes, Pousette, & Törner, 2019; Keegan & Den Hartog, 2004), *transactional* (e.g., Aga, 2016; Grill et al., 2019), and *authentic* (e.g., Lau, 2017; Lloyd-Walker & Walker, 2011; Toor & Ofori, 2008) leadership styles. The results suggested that the size and scope of the project are the determining factors for the appropriate leadership style. Specifically, the empirical outcome indicates that: (i) transformational leadership is best suited in situations where the implementation of change requires a low level of resistance from the project team; (ii) transactional leadership is more adequate for smaller size projects to prevent burnout among team members if the projects last longer than few months; and (iii) authentic leadership was recommended for projects where the ethical position of the leader is important, as well as the need for all-inclusive leadership is the determining factor for success.

The following sections will outline the key characteristics of transformational, transactional, authentic, and Path-Goal leadership styles.

Transformational Leadership

Transformational leadership is advocated to enhance self-motivation, creativity, innovation and knowledge sharing, self-esteem, and self-efficacy, aimed at developing a competent project team. Yet, critics argue that transformational leaders: (i) are visionaries who do not emphasize the participation of team members in decision-making, hence more involved in traits-driven leadership (Northouse, 2019); and (ii) are seen as heroes deciding the actions of followers instead of encouraging shared leadership vision, hence transformational leadership is not a practical concept (Yukl, 1999, 2008). Implying that 'leadership-learning' can be difficult since successive performances of transformational leaders are reflections of prior experience in similar leadership roles. Again, this theory is silent on the expected action of the leader when there is a change in the project situation, especially if there is a need to enhance person-specific competence. This was corroborated with empirical results suggesting high multicollinearity among the factors in the measurement instrument (Tejeda et al., 2001). Thus, the transformational leadership approach is inadequate for handling the contingency needs of leading a project team in the oil and gas industry with complex project variables and business uncertainties.

Transactional Leadership

Transactional leadership focuses on contingent rewards and management by exception, hence distancing from team-building leadership where people's emotions are crucial (Avolio & Bass, 2002; Howell & Avolio, 1993; Northouse, 2019; Shadronis et al., 2013). Specifically, the management by exception (MBE) approach is not proactive in handling team-related project delays from low productivity. The top-down transactional leadership approach (Burns, 1978; Northouse, 2019) is unsuitable for projects where cohesive team interaction is needed to improve competence for effective project delivery (Dinh & Salas, 2017; Kloppenborg, 2015). However, it has been advocated in the literature that there is the need to blend both transformational and transactional leadership to take advantage of their strengths to enhance productivity (e.g., Schriesheim et al., 2006). Thus, balancing intellectual stimulation from transformational leadership and contingency reward from transactional leadership can effectively enhance project safety (Grill et al., 2019). When applied to team effectiveness, transactional leadership can encourage destructive competition among team members leading to stress and demotivation by facilitating individualized-focused behaviours. Again, there is the possibility of a fear-factored relationship with a transactional leader who continually enforces MBE. Consequently, this paper posits that transactional leadership is inappropriate for team project leadership because of the complex nature of cross-cultural factors such as power distance and collectivism in project teams.

Authentic Leadership

The studied domains of authentic leadership include leader self-awareness, relational transparency, internalized moral perspective, and balanced processing (Walumbwa et al., 2008). The dimensions of this leadership approach relate to self-improvement, which can improve the leader's relationship with the project team. These measurable dimensions clearly show how authentic leadership can

influence team spirit and behaviour. It is essential to know that the leadership enforces the organisational culture in the team, hence creating room for the dominant organisational culture domain to regulate the team's effectiveness. Therefore, a leadership approach that enhances job motivation is critical to the team's success. Findings indicate that an authentic leadership approach positively affects employees' motivation (Hidayat, 2016). It can create transparent communications and enables employees to adapt to the working culture in the organisation (Men & Stacks, 2014). It encourages team-building behaviour through the self-regulating conduct of the authentic leader (Lyubovnikova et al., 2017); and can positively influence change-oriented behaviour in employees due to transparent communication (Alavi & Gill, 2017). However, the authentic leadership approach's measurable dimensions are at the formative stage and not clearly defined in the literature (Alvesson & Einola, 2019). We believe that the theoretical indications of this leadership style can discourage self-will and self-confidence in the team and will not be adequate for project leadership.

Path-Goal Leadership

The Path-Goal (P-G) leadership theory can be defined from the perspective of the expectancy theory (Spector, 2012); that the expectations of immediate or future satisfaction by the followers must be matched with the appropriate leadership behaviour (Northouse, 2016). We advocate for a people-oriented project leadership that eliminates the barriers to performance, hence the focus of P-G leadership. An appropriate project leadership approach must combine and balance leadership's process and influencing features to enhance team performance. For instance, millennials have increased in the workplace, and studies suggest that this category of workers prefer leadership career development and leadership behaviour that aligns with their personality and emotional needs as motivation for organisational adaptiveness (Gallup, 2016; Umuteme, 2020). Hence, the leadership structure must be funded to provide training for and developmental needs of future leaders (Zaccaro & Klimoski, 2001). This also resonates with the characteristics of P-G leadership. Polston-Murdoch (2013) suggests that subordinates' commitment is influenced by the directive, supportive, participative, and achievement-oriented leadership styles of the P-G leadership. Again, leadership at the individual level advocated in the P-G leadership was more supportive of subordinate's performance than the transformational leadership style (Schriesheim et al., 2006). Since leadership is the creation and sustenance of the leader-follower relationship (Graen & Uhl-Bien, 1995), a non-prescriptive leadership approach is more appropriate in a project environment, where the leadership style evolves out of the characteristics of the job and that of the worker. The domains of P-G leadership theory include directive, achievement-oriented, supportive, and participative leadership styles, as discussed further below.

- i. *Directive leadership*: When the task is ambiguous, unstructured, and complex, the directive leadership behaviour enables the project leader to improve collaboration with team members (Vroom & Jaago, 2007). However, this approach can be dogmatic (dogmatic) and authoritarian, requiring team members to obey rules. Directive leadership behaviour is evident in scope definition, budgeting, and schedule, which provide a governing framework through the approved standards and specifications.
- ii. *Supportive leadership*: When tasks are non-complex, structured, and routine, supportive leadership behaviour can assist a team member who is already competent in the task to improve performance. The support can even come in the form of rewards and incentives, enabling the team member to meet their physiological needs or providing the needed technology to increase productivity.
- iii. *Participative leadership*: For tasks that are ambiguous, unstructured, and with unclear scope, this leadership behaviour can clarify the project scope, the nature of technology needed, and further training to improve performance.
- iv. *Achievement-oriented leadership*: When executing ambiguous, unclear, and unstructured tasks, improving team performance requires a leadership behaviour that encourages resilience from team members and provides the necessary competence. In some instances, the project leader can opt for expert service by contracting that aspect of the job to credible contractors with the required know-how. This leadership approach improves team performance during the project's feasibility study and front-end design phases or when the schedule creeps. Achievement-oriented leaders set high standards, give stretching targets, and encourage teamwork.

Effective Project Leadership

Project leadership is effective when the leadership adopts a behaviour that aligns with the current situational demand of the project. As seen from the review above, transformational, transactional, and authentic leadership behaviours are not suitable as independent styles in a project environment when cross-culture and team effectiveness are the driving constructs. Again, these leadership styles are not individually ideal for exceptional project performance compared with the expected project leadership attributes discussed earlier in the literature (Margules, 2011). Also, the demand for multiple and concurrent leadership approaches throughout the duration of any project requires synchronous collaboration and communication in the project team (Kuster et al., 2011). The adopted leadership approach must facilitate the communication of vision, establishing goals, monitoring progress, and motivating subordinates (Mumford et al., 2000). To overcome project delays, the team must be able to access on-the-job competence and skill-based intervention training needed for effective team performance. The causes of project delays are mapped against the effect on project performance (Ruqaishi & Bashir, 2015), as presented in Table 1.

Table 1: Effect of project delays on project quality

Causes of Project Delay (Ruqaishi & Bashir, 2015)	Effect on Project Performance
Poor scope definition	Schedule creep and escalation in project cost
Incompetence	Continuous rework
Delayed payment to contractors	Burnout and loss of interest
Lack of ownership	Poor participation in decision making
Poor labour productivity	Reduction in project value
Poor incentives	increasing turnover of employees
Inadequate organisational structure	Poor leadership
Effect of social cultural factors	Non-productive conflicts

Therefore, the demands of project leadership based on the identified causes of project delay in Table 1 are discussed in this section with the following subheadings.

- i. Clarify scope, goals, and objectives.
- ii. Clarify organisational structure.
- iii. Enhance team competence.
- iv. Team ownership of project activities.
- v. Improve team productivity.
- vi. Reduce the adverse effects of socio-cultural factors.

Clarify Scope, Goals, and Objectives

The scope of what the project must achieve forms the basis for the project life cycle. Scopes form the basis for project performance quality measurement systems. The project leadership must continuously clarify the scope and determine the resources needed for team performance. Thus, the project leader must be skilled in defining the project sponsors and the project team's scope, goals, and objectives (Pyzdek & Keller, 2013). During project meetings, open-ended questions are allowed as avenues for the leadership to clarify any lacuna the team may identify in the project scope. In most projects, there are possibilities that the current team members might not have been part of the initial team during the project definition stage (Kuster et al., 2011), which emphasizes the need for continual clarification of the scope during daily team meetings and milestones review meetings. Other project leadership responsibilities include controlling project costs and deliverables, thus placing a *directive* role on the leadership.

The right project leadership minimizes role and scope ambiguities, provides roles-efficient structure, and minimizes project complexities when the project environment changes the project goals. Adequate motivational incentives from the leadership with *participative* behaviour by the project leaders can minimize the effect of uncertainties arising from a change in project goals on the team. A participative leadership approach enables the team to take ownership and demonstrate the required organisational citizenship behaviour (OCB) during decision-making to achieve the added goals. When additional goals are needed for robust project delivery, the need to harmonize and share available resources among the project team members is imminent. Here also, a participative approach to leadership can effectively achieve the productive utilization of project resources. Projects can lead to innovative ideas that are unique to the current project, and the protection of intellectual property must be defined as an objective of the project by the leader (Atesmen, 2015). Therefore, the project objectives must include keeping project records and documentation confidentially. Thus, confidentiality and the classification of documents must be an aspect of the project that the leadership must oversee. The need to train team members, such as in communication productivity tools, can lead to total disruption of the project schedule if not planned for *ab initio*. Other delays in project schedule delivery can arise when key team members attend un-schedule conferences and workshops. These are some of the unforeseen team-related project uncertainties that must be accommodated as the project progresses. Leading a team to complete projects ahead of schedule requires both *supportive* and *achievement-oriented* leadership behaviour. So far, *directive*, *participative*, *supportive*, and *achievement-oriented* leadership behaviour have been identified as applicable in clarifying project scope, goals, and objectives. These leadership behaviours are the defining dimensions of the P-G leadership theory.

Clarify Organisational Structure

An organisational structure defines the authorities, roles, and lines of reporting. A project team is a subset of the larger organisational leadership structure in the oil and gas industry. Implying that the adopted leadership behaviour must align with the defining objectives of the organisational culture, which will also affect the project team's effectiveness from the perspective of the productive output and socializing process within the team. For instance, in Japanese organisational culture, high team productivity is linked to a leadership structure that allows collective decision-making (Miroshnik, 2013). Thus, in-group and out-group project team members can protect the organization's intellectual property with a collocated workforce in a cross-cultural project environment (Atesmen, 2015). A contact-relationship and role definition project- team structure ensures that every team member can access the leadership when needed. As empirical evidence suggests, group dynamics is critical to project success (Kaulio, 2008), and can be positively related to performance when there is effective participative and supportive leadership. Cameron and Quinn (2011) developed organisational structures by the competing values framework (CVF), which defines the rigidity and flexibility of the leadership structure. Flexible

structures can facilitate innovation when adaptability and creativity are the core principles of employees' engagement (Aiken & Hage, 1971). Again, flexible organisational cultures can encourage affiliation, membership, and support within a project team (Cameron & Quinn, 2011). Accordingly, Cameron and Quinn (2011) have identified the need for internal control and integration in a flexible organisational structure to create leadership presence in hierarchical structures. In the oil and gas industry, teams in major projects are controlled by hierarchy leadership structure to enhance the delivery of project quality through defined controls, and a flexible structure within the team can enhance the adoption of a change process and adaptability of the team to the dictates created by the change. Thus, the need for *directive* and *achievement-oriented* leadership behaviour is evident in defining a working organisational structure that can enhance project delivery.

Enhance Team Competence

An additional responsibility of the project leader is to enhance the competence of team members. Project Teams cannot perform top-quartile tasks without the right knowledge, skills, or job-related abilities (Cobb, 2012). The gaps in competence must be addressed before the project execution phase. Hence, the appropriate leadership approach must be adopted to enhance job-related competence in the team. Even when the job is outsourced to a contractor, the client needs the right competence to validate and double-check the work executed by the contractor for accuracy and quality (Atesmen, 2015). Competence can be enhanced when the project leadership keeps the team up-to-date in applying advanced technology that can improve the productive output of the team and steer project activities within the approved budget (Atesmen, 2015). From a psychological viewpoint, the leadership can manage team members' emotions through praise for a job well done and providing counseling and expertise support to overcome counter-productive emotions arising from the fear of incompetence and inefficacy. Also, the required soft skills are needed to build confidence and demonstrate ownership in the team. The project leader must encourage the proactive identification of the issues that can hinder productivity (Atesmen, 2015). The leadership style adopted to checkmate incompetence among team members must be connected to the level of innovation and creativity required in the project. Avenues for knowledge sharing such as conferences where team members can interact with experts in their field can prevent reinventing the wheel. A competitive, innovative environment can sometimes encourage knowledge sharing and innovation-driven interactions. The leadership can support a competitive knowledge-sharing environment to reduce ego-driven interactions between well-informed team members and those lower on the project learning curve. These project-laden responsibilities require a project leadership experienced people-factored leadership for high performance, thus demanding both *participative* and *supportive* leadership behaviour. In this case, the participative behaviour of the project leader resonates with the definition of P-G leadership, where the leader is deliberately involved in the work process by motivating team members through the provision of additional resources and the alignment of the characteristics of the team members to the specifications of the task.

Team Ownership of Project Activities

Team members can demonstrate ownership if they are part of the decision-making process through consultation and delegation (Yukl, 2013). Accordingly, (Katzenbach & Smith, 2001) has suggested that team members can improve their leadership and decision-making capabilities and demonstrate ownership and accountability in a participative leadership environment. Hence, it is possible that allowing team members to handle superior tasks can improve self-efficacy and confidence. With a team leadership approach, the leader can recognize the important role(s) of team members, their competence, and the possible influence of the absence of any team member on productivity. This can lead to a proactive ring-fencing of highly rated team members whose competencies are needed most to enhance productivity. Hiring highly skilled employees is time-consuming and costly as a consequence of not ring-fencing members whose competencies are critical to the project's success. The absence of career-enhancing motivators has been identified as one of the reasons for increasing employee turnover (Umuteme, 2020); hence the leadership is equally expected to enhance the organisational adaptiveness of the team members by providing avenues for career enrichment. The leadership must reduce role-related conflicts through exhaustive discussions with the affected staff (Atesmen, 2015). When new members resume the roles for the first time, they must be abreast of the schedule, cost structure, and project status to demonstrate that they are needed and recognized in the team by the leadership. To ensure proper handover when the new team member is taking over the role(s) of older staff, a long transfer period must be allowed where the new team member is employed before the more senior staff exits the team. Several meaningful team meetings can help clarify and explain the organization's position on critical project issues. An effective project leader does not always dictate the approach to problem-solving, except where it is crucial to the organization's image. The proposed approach to problem-solving, including change management, must have evolved from deliberate brainstorming sessions that can optimize project schedule and success. The project change management process can be accelerated when the team maintains a user-friendly document repository to create frictionless access to information. By accentuating the criticalness of enhancing project value, the implementation time of all suggestions on project improvement must be related to the success of other project activities so that ego-driven suggestions from team members are discouraged. To avoid ego-hurting, every suggestion during the decision-making brainstorming process must be weighed on their parametric relevance to the project situation and team members must be objectively informed why their suggestion(s) did not scale through the decision-making process. Open-minded leadership approach encourages members of the team to have an all-inclusive feeling towards key decisions that affects project success and team performance. Teamwork is critical, especially as project is ending, which calls for achievement-oriented leadership behaviour from the project leadership to discourage social loafing among team members and prevent workers' strikes, including ensuring progressive time management, recognising the need for international teleconferencing if needed using effective communication technology, and the

need to separate critical from non-critical tasks. It has been noted in the literature (Atesmen, 2015) that the team's performance can deteriorate significantly during change and modifications to the project scope and schedule, and the leadership must not allow disruptions to the work process at this time. This again calls for a string directive and achievement-oriented leadership approach. A team from a work culture with strong uncertainty avoidance needs continuous clarity of roles and organisational structure (Hofstede, 2011) to drive project achievement. It is highly recommended that while the feeling of ownership through delegation is enhanced when driving for project success, such roles must not be too demanding on the available human resources. We recommend directive, achievement-oriented, supportive, and participative leadership in this project leadership role.

Improve Team Productivity

Empirical results suggest that a team's performance is linked to leadership (Cobb, 2012; Cobb & Hackman, 2003). In a project environment, the leadership can enhance trust, commitment, innovation-driven conflict, accountability, and team performance. These aspects of teamwork as the five dysfunctions in a team by Lencioni (2002), and the literature suggests that teamwork can be improved when team members acknowledge their imperfections. Thus, the project leader must evaluate the team's performance based on "relations, integrity, quality of work, reliability, stress management, ambition, attitude, attendance, communication skills, knowledge, and training and improvement needs" (Atesmen, 2015, p. 15). When this is done, project delivery can be exceptional and commissioned ahead of schedule. This will require strong *achievement-oriented* leadership behaviour. Achievements come when the scope is clearly defined (*directive leadership*), providing the required support to the team members (*supportive leadership*), and allowing shared leadership in the decision-making process (*participative leadership*). These aspects of team productivity resonate with the P-G leadership theory. When productivity is achievement-oriented, the activities on the critical path in the project work breakdown structure must be prioritized. To achieve effective project team leadership, the Project Management Institute recommends that the characteristics of the leaders must match that of the team (PMI, 2017). Implying that the leadership behaviour must be in harmony with the expected behavioural norms among team members. To improve team members' commitment, the project leader will need to motivate weak members of the team who need handholding and adopt an open-door approach to communication so that they can participate in programs deliberately set in place to improve their performance. Efficiency can be improved by continually assessing the capabilities of available human resources.

Team productivity can also be improved if the team observes that the project leadership is positive, enthusiastic, optimistic, and realistic in achieving project goals. The leadership can demonstrate these behaviours by removing barriers hindering productivity. Project costs can be controlled through milestone schedules, downsizing the team size when required, and possibly shutting down the project site in situations critical to safety or cost overrun. The project leader must be composed and experienced in implementing suitable anger control mechanisms to handle unforeseen events that negatively affect team performance (Atesmen, 2015). Leadership efficiency can be improved through progress review meetings because it provides an avenue for continuous interaction, knowledge sharing, and team cohesiveness through social bonding and belongingness. Another critical factor that negatively affects team productivity is changing project leadership during the execution phase. Leadership-team members' interaction is a form of interpersonal psychological bonding that can be undermined when the leadership is frequently changed. The performance of team members can increase with adequate short or long-term incentive(s) (Levy, 2018; Vazquez, 2019). Whereas it is not so desirable in a collectivist culture where the team's performance ranks every team member, the project leader must recognize exceptionally performing team members and motivate them through rewards. Remunerations must be kept confidential to prevent team members from comparing salaries and not to discourage employees who feel they have not been adequately compensated (Atesmen, 2015).

Reduce Negative Effects of Socio-Cultural Factors

Socio-cultural factors such as attitudes, norms, and values are present in every team and are defined by culturally shared cognitive frames (Schein, 2010). For projects in the oil and gas industry where the team size can be above 100 members, socio-cultural factors can influence the norms of members. Recent studies suggest that workers can be more inclined to their national cultures instead of the organisational culture (Hofstede et al., 1990). In such a situation, the leadership must ensure the organisational culture becomes the determining norm for all social conduct, focusing on productivity. Team members will want to observe national holidays and sometimes religious holidays. This must be factored into the project schedule such that team members are encouraged to have their leave and absence periods within their national or religious holidays. Studies have shown that cross-cultural differences can negatively impact team performance (Dickson et al., 2003; Dorfman et al., 2012). We recommend *participative* leadership to help minimize this effect in project teams.

Why a multi-leadership approach is needed in leading project teams?

The facts presented so far elucidate the position of this study on why a multi-leadership approach is needed in leading project teams to achieve the project scope within schedule and cost. In this section, we have compared the four leadership theories discussed earlier with the project team leadership domains defined in the literature (PMI, 2017) in Table 2. Hereafter, we will provide the attributes of the key demands of effective project leadership and the appropriate leadership behaviour, and how these attributes relate to the P-G leadership theory in Table 3. Again, the characteristics of project leadership in Margules (2011) presented earlier will also be compared with the domains of P-G leadership theory in Table 4. Thus, our key findings are summarised below in Tables 2, 3, and 4. As indicated in Table 2, transactional leadership style is more effective in team management than team leadership, as corroborated

in the literature (e.g., Lowe et al., 1996), and transformational and P-G leadership are more inclined to the characteristics of project leadership in the literature (PMI, 2017). However, Lowe et al. (1996) submit that the influence of task and the level of interaction between the leadership and subordinates on leadership effectiveness was not considered in transformational leadership theory.

Table 2: Comparing project leadership styles

Project Domain (PMI, 2017)	Leadership	Leadership Theories			
		Transformational	Transactional	Authentic	Path-Goal
Collaborative power, Guide & influence	relational	Consideration for the Individual	-	Balanced processing of opinions	Directive; Supportive; Participative
Develop		Intellectual stimulation	-	-	Achievement/Goal oriented
Innovate		Intellectual stimulation	-	-	Achievement/Goal oriented
Relationship with people is Key		Consideration for the Individual	-	Self-Awareness & Balanced processing of opinions	Supportive
Stimulate Trust		Idealised influence	-	Relationship driven by transparency	Participative
Futuristic vision		Inspiring motivation	-	-	Achievement/Goal oriented
Focus on what & why?		Intellectual stimulation	-	-	Participative
Emphasis on the horizon		Idealised influence	Contingent reward	Internalised moral code	strong Directive
Challenge status quo		Intellectual stimulation	Contingent reward	Internalised moral code	strong Achievement/Goal oriented
Prioritize alignment & motivation	vision,	Inspiring motivation	Contingent reward	-	Achievement/Goal oriented

Table 3: Key demands of project leadership

Project Leadership Demands	Path-Goal Leadership Theory Styles
Clarify scope, goals, and objectives	Directive, Achievement-oriented, Supportive and Participative
Clarify organisational structure	Supportive and Participative
Enhance team competence	Directive, Achievement-oriented, Supportive and Participative
Team ownership of project activities.	Supportive
Improve team productivity	Achievement-oriented
Reduce the adverse effects of social and cultural factors	Participative

Table 4: Comparing project leadership styles with Path-Goal leadership

Project Leadership Styles (Margules, 2011)	Path-Goal Leadership Theory Styles
Visionary	Achievement-oriented
Affiliative	Supportive and Participative
Participative	Participative
Coaching	Supportive
Pacesetting	Achievement-oriented
Directive	Directive

From Tables 2, 3, and 4, we ranked each P-G leadership style by counting the total number of times they were listed against the characteristics of project leadership identified in the literature, as presented below in Table 5. The purpose of the ranking is to identify the P-G leadership theory's leadership behaviours that prominently determine project success from a theoretical perspective.

Table 5: Ranking of Path-Goal leadership styles in projects

Source	Total Number of Occurrence of P-G Leadership Styles			
	Directive	Achievement-Oriented	Supportive	Participative
Table 2	2	5	2	3
Table 3	2	4	4	4
Table 4	1	2	2	2
Total	5	11	8	9

Discussion

Whereas project leadership demands strong competence in people-focused leadership that emphasizes team motivation, previous studies on adopting a leadership behaviour in construction projects did not consider the in-depth analysis of the evolving demands on the project leader as we have done. In Table 2, we compared the project leadership domain discussed in the literature (PMI, 2017), transformational, transactional, authentic, and path-goal leadership theories. The outcome suggests that the P-G leadership theory was more inclined to enhance project delivery when the project's success is hinged on the ability of the leadership to motivate team members. In Tables 3 and 4, each of the P-G leadership styles was matched with the demands of project leadership based on the identified reasons for project delays in the literature (Ruqaishi & Bashir, 2015) and project leadership styles in the literature (Margules, 2011), respectively. We have also ranked each of the leadership styles of the P-G leadership theory in the order: *achievement-oriented, participative, supportive, and directive*, as presented in Table 4, where *achievement-oriented leadership* was the dominant leadership style for project success. Implying that project activities are mainly ambiguous, unclear, and unstructured. The above outcome suggests that the project leader must be skilled in technical aspects and have good communication skills to succeed. This is well suited for projects in the oil and gas industry where technical knowhow underscores all the phases of the project.

The P-G leadership theory suggests that the failure of an organisation is contingent on the adopted leadership approach. Also, the P-G leaders demonstrate technical competence in executing project activities and strong communication skills. This enables the P-G leader to effectively motivate the team for top-notch project delivery. The *participative* leadership style of the P-G theory support shared leadership (Barnett & Weidenfeller, 2016; Martin et al., 2014), which is appropriate for work planning and organizing. The theoretical underpinning of the P-G leadership theory underscores the need to adapt the characteristics of the team to that of the task, which aligns with the kind of projects executed in the oil and gas industry. In removing the barriers that negatively impact productivity, the P-G project leader motivates the team by adopting a hybrid of the P-G theory's achievement-oriented, directive, participative, and supportive leadership styles. Thus, the P-G project leader is *directive* while clarifying the goals and client expectations; *supportive* while assisting team members who lack the confidence to perform their job; *participative* while actively involved in correcting mistakes that enhance project quality and delivery; and *achievement-oriented* while setting high standards and providing means to achieving the goals of the project (Polston-Murdoch, 2013). Also, the P-G leadership styles have been suggested to enhance the psychological well-being of team members because of the motivating role of the leader in driving the team members towards high performance and overall job satisfaction (Polston-Murdoch, 2013). This resonates with the position of Müller and Turner (2007) that the appropriate leadership style must be adopted for the desired performance-related response from team members. Thus, one can say that a project team can be effective when the leadership defines and clarify the task and encourage and motivate the people to understand and complete the task. We have represented the relationship between leadership, task, and people. In Figure 1 below.

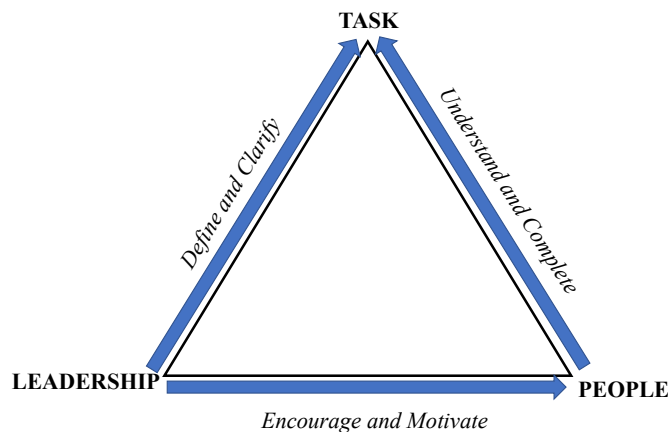


Figure 1: Our conceptual representation of the relationship between leadership, task and people in projects

Conclusions

This paper presents the suitability of the P-G leadership theory in projects. We achieved this by in-depth review and analysis of extant literature on project leadership. Project leadership challenges encompass developing technical and behavioural competencies of every team member. This study advocates for a unique project leadership role that can enhance team effectiveness and real-time project delivery, including cost-effectiveness. This is because the oil and gas industry project is related to the work environment and team characteristics. Effective and efficient project leadership competencies are demanded to overcome project challenges. Project leadership is effective when the leadership adopts a behaviour that aligns with the current situational demand of the project. The right project leadership minimizes role and scope ambiguities, provides roles-efficient structure, and minimizes project complexities when the project environment changes the project goals. The three leadership approaches – transformational leadership, transactional leadership, and authentic leadership that have been studied for project leadership styles are not individually ideal for exceptional project performance when compared with the expected project leadership attributes in the literature. We, therefore, recommend the P-G leadership approach as the most suitable for project leadership, especially in the oil and gas industry. This is because the P-G leadership styles have been suggested to enhance the psychological well-being of team members because of the motivating role of the leader in driving the team members towards high performance and overall job satisfaction. Based on evidence from the literature, we ranked each of the leadership styles of the P-G leadership theory in the order: achievement-oriented, participative, supportive, and directive. The study revealed that achievement-oriented leadership is the dominant leadership style in projects. The paper is limited because it is not an empirical study. To close this gap, a study is currently investigating the interaction between the P-G leadership styles and other project success factors mentioned in this paper – cross-culture, organisational culture, and team effectiveness.

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