

Leadership Effectiveness and Inter-Functional Coordination in Multinational Oil and Gas Firms in Nigeria

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ABSTRACT

This study assessed the relationship between leadership effectiveness and inter-functional coordination in multinational oil and gas firms in Nigeria. The methodology was quantitative and anchored on a correlational design. Data was obtained from 96 management staff from 9 multinational oil and gas firms in the South-south of Nigeria using the structured questionnaire. Three (3) null hypotheses were tested in line with affirming the significance and strength of the relationship between leadership effectiveness and measures of inter-functional coordination such as functional design, collaboration and reward system using the Spearman's rank order correlation coefficient. The findings established that there exists significant correlations between leadership effectiveness and the three measures of inter-functional coordination; hence the rejection of all hypotheses. It was concluded that the development and structuring of leadership for improved effectiveness, advances the substantial navigation of the internal workings and settings between groups and functions, and by that facilitates outcomes of Inter-functional coordination such as functional design, collaboration and reward system in multinational oil and gas firms in Nigeria.

Keywords: Inter-functional coordination, Leadership effectiveness, Functional design, Collaboration, Reward systems.

INTRODUCTION

Effective organisations are those that not only identify and engage suitable employees for roles but also integrate its various functions in such a way that facilitates its performance and going concern. Inter-functional coordination refers to the level of integration and synchrony between units and functions within the organisation; that is to say, the extent to which they cooperate (Khan

& Wisner, 2019). It describes the level of collaboration and cohesion expressed by the units within the organisation and the extent to which this can be considered harmonious. According to Khan and Wisner (2019), inter-functional coordination enables internal stability and necessitates favourable conditions for organisations to operate efficiently and effectively.

Related studies (Marjanovajovanov, Sfianova, Davcey & Temjanovski, 2015; Yinan, Huo & Wang, 2017) suggest that much like systems, unit activities within the organisation account for its outcomes, including perceptions of its performance by customers. In their research Marjanovajovanov, *et al* (2015) revealed that the strengthening of workplace relationships and collaboration, anchored on the training and development of staff, as well as the rotation of roles ultimately led to increased trust, communication and cooperation between groups and members of the organisation (Karman, 2020).

Goddard, Glass, Dainty and Nicholson (2016) also observed that there is a growing interest and regard for improved malleability in the behaviour and practices of human resource management especially from the angle and lens of leadership. This comes at the heels of Heffeman and Dundon (2016) observation that historical and evolutionary outcomes in business practices owing to the nature of population, economic and political dynamics are such that necessitate the imperatives of restructuring and realigning human resource management practices to suit the changing nature of organizations. Thus, the shift towards human resources control processes and systems through effective leadership practices are such that aim, not only at enriching the content of the organizations human capital, but also harnessing and channelling its values and capacities in ways that are relevant and appropriable to the context of the organization (Cooke, Cooper, Bartram, Wang & Mei, 2019).

Nonetheless, despite the noted imperatives of leadership in driving and necessitating intra- and inter-organizational outcomes, there is a scarcity of research which specifically addresses its relationship with inter-functional coordination – especially within the borders of African countries such as Nigeria. This follows Goddard et al (2016) acknowledgement of the role of leadership as the coordinating centre and medium through which cohesion and control are applied and expressed within organizations. Thus, as a departure from previous concerns, this study investigated the relationship between leadership effectiveness and inter-functional coordination in multinational oil and gas firms in Nigeria.

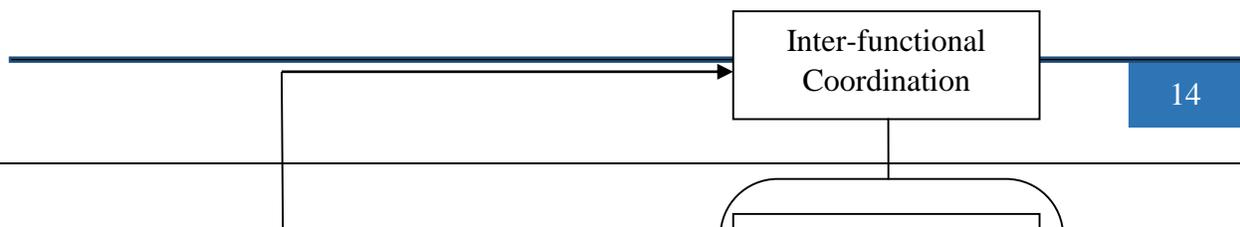


Figure 1: Conceptual Framework for leadership effectiveness and inter-functional coordination

Source: Researcher's desk (2021) with the measures of inter-functional coordination adapted from Khan and Wisner (2019).

Objectives of the Paper

The objectives of this paper were to:

- i. Determine the relationship between leadership effectiveness and functional design in multinational oil and gas firms in Nigeria
- ii. Ascertain the relationship between leadership effectiveness and collaboration in multinational oil and gas firms in Nigeria
- iii. Examine the relationship between leadership effectiveness and reward system in multinational oil and gas firms in Nigeria

Research Questions

The following research questions were addressed in this paper

- i. What is the relationship between leadership effectiveness and functional design in multinational oil and gas firms in Nigeria?
- ii. What is the relationship between leadership effectiveness and collaboration in multinational oil and gas firms in Nigeria?

- iii. What is the relationship between leadership effectiveness and reward system in multinational oil and gas firms in Nigeria?

REVIEW OF LITERATURE

Theoretical Foundation

Institutional Theory

The institutional theory according to Moisander, Hristo and Fahy, (2016) offers a position on the processes and approaches in which frameworks, structures and practices become established and reinforced as features of the organisation. Through the institutionalization of structures and schemes, organisations are able to reorient their behaviour and effectively adapt to the needs and requirements of their environment. Similarly, Jo, McKenzie and Joette (2019) asserted that the relationships and level of collaboration between functions/units within the organisations necessitated through the renewing of skills and work designs that enable effective interaction, enhanced integration of processes and functions within the organisation. The institutional theory, through its proposition on the implications of human resource content and the establishment of systems emergent from the needs and dynamic nature of organisations, provides strong argument in support of the relationship between leadership effectiveness and inter-functional coordination.

Leadership Effectiveness

Leadership is conceived as a process where one or more persons influence a group of person to move in a certain direction. The word leadership has been used in various aspects of human endeavour such as politics, business, academics and social works. Ghebreorgis *et al* (2018) argue that the degree to which the individual exhibits leadership traits depends not only on his characteristics and personal abilities, but also on the characteristics of the situation and environment in which he finds himself.

Leadership effectiveness thus hinges on the capacity of the leader to engage the required form of followership and also at the same time achieve the goals and objectives of the organization. This suggests a twofold approach, with the former emphasizing on relationships and the latter focusing on the achievement of organizational or group goals. This follows Kwon (2019) observation that without followership, the role or responsibilities of leaders are without context. Thus, fundamental to the effectiveness of leadership is the issue of context, and thereafter the focus on the achievement or attainment of organizational goals or objectives.

Inter-functional Coordination

In order to function effectively, multifunctional systems need to combine the efforts of the component teams responsible for operational task execution (Gosling *et al*, 2016). Such horizontal

coordination represents the extent to which component teams from the same hierarchical level align and synchronize their activities with each other (Tsai & Hsu, 2014). Effective horizontal coordination enables multifunctional systems to synthesize component teams' distinct contributions and utilize these teams' complete range of specialized resources (Craps *et al*, 2019).

Regrettably, however, horizontal coordination is often difficult to achieve due to multifunctional systems' sheer size (Jingu, 2015) and due to misunderstandings that can arise from differences in component teams' languages, routines, and thought-worlds (Wenxiao, *et al*, 2016). Indeed, it appears notoriously difficult to effectively manage multifunctional systems, and many of the documented performance breakdowns within such systems have been attributed to ineffective horizontal coordination (Kaur & Sharma, 2015). Three measures of inter-functional coordination are discussed accordingly – functional design, collaboration and reward system (Khan & Wisner, 2019).

Functional design: The functional design, as applied within the context of human resource management describes the interrelatedness and systemic structuring of inter-group or inter-departmental relationships within the organisation. While the concept encapsulates a broad range of meanings and definitions within engineering, computer programming and other subjects outside human resource management, its application within the context of the management sciences is noted to focus on the nature of connectivity that exists between the various units and departments in the organisation (Wenxiao, Yicheng, Yunju & Lijie, 2016).

Collaboration: This measure describes the capacity for agreeability in terms of shared responsibilities and goals. Collaboration describes the situation wherein groups or units within the organization are able to share ideas and work together and supportively (Jingu, 2015). Collaboration according to Khan and Wisner (2019) underlies the success of every team and organization. This view is shared by Jo *et al* (2019) who also opined that collaboration is the foundation upon which successful relationships are advanced and achieved. For organizations to thrive and develop, Schrujier (2020) argued that there is the need for organizations to emphasize on work modules and frameworks that allow for increased interaction and communication between groups and levels within the organization.

Reward System: Reward systems in organisations detail the organisations policies in line with compensating its workers. A reward system could be financial or non-financial. (Wucher, Martiny, Lani, Pardoen, Bailly & Dumas, 2017) described an organisations reward system as that concerned with the tangible recognition and encouragement of its workers, either in line with established contractual agreements or that which is targeted at motivating the workers or members of the organisation.

Rewards systems are such that also ensure optimal functionality and performance given its usefulness in serving as motivational factors in stimulating role performance on the part of the workers. Ramli (2017) argued that the idea of rewards stems from the need to encourage and by that reinforce particular actions, practices or behaviour on the part of the worker. It also details the various methods through which the organisation is able to maintain control and regulate the behaviour of organisational members, groups and by that, the various functions within the organisation (Pradita, 2017).

Leadership Effectiveness and Inter-Functional Coordination

Studies (Leroy *et al.*, 2018; Ghebregiorgiset *al.*, 2018; Kwon, 2019) identify leadership effectiveness as a predictor of employee and group productive outcomes; and as necessitating change development and organisational adaptability for organisations. The capacity for inter-functional coordination is one which, as Ogbonnaya *et al.* (2017) noted flows from the level of integration and interaction that is evident within the organisation. The author further observed that organisations are primarily a function of the content and quality of their leadership and the extent to which it is able to drive and direct its human resource.

Most studies (Cooper *et al.*, 2019; Kwon, 2019) on leadership, especially such as advanced within the context of human resource management literature, appear to focus more on coordination and directing through the establishment of rules, policies and regulatory frameworks; however, as Wright and Ulrich (2017) noted it is imperative that perspectives are also shifted towards the exemplary actions and supportive behaviour from the leadership, which could also be designed to stimulate and motivate the workers, while at the same time channelling their activities and actions towards intended outcomes for the organisation. Wright and Ulrich (2017) argued therefore that considering such implications of leader behaviour, effective actions in this regard are such that are designed to not only address structural features of control but also the nature of relationships between leadership and organisational subordinates, and the extent to which this impacts on work outcomes such as collaboration within the organisation. Thus, in regard of the review, the following hypotheses are to be tested:

Ho₁: There is no significant relationship between leadership effectiveness and functional design in multinational oil and gas firms in Nigeria

Ho₂: There is no significant relationship between leadership effectiveness and collaboration in multinational oil and gas firms in Nigeria

Ho₃: There is no significant relationship between leadership effectiveness and reward system in multinational oil and gas firms in Nigeria

RESEARCH METHODOLOGY

The correlational design was adopted in this investigation of the relationship between leadership effectiveness and inter-functional coordination. The population for this study comprised of all nine (9) multinational oil and gas firms operational in Nigeria as sourced from the Department for Petroleum Resource (DPR). A total number of 99 management staff (9 regional managers; 9 HR managers; and 81 functional supervisors) was adopted as the unit of measurement for this study with information on functions and departments sourced from personnel within the oil and gas firms of interest. The population frame was based on criteria of referent positions within the oil and gas firms as well as key departments/functions considered as dominant within most oil and gas firms in Nigeria. These comprised of Operations and Maintenance, Health and Safety, Facilities Engineering, Production, Sub-surface, Geophysics, Human Resource, Finance and Accounting, and Petro-physics.

The data for this study was sourced from the primary source using the structured questionnaire. The structured questionnaire is considered as suitable for this investigation as it enabled control over the data to be generated in the study (Neuman, 2011). Creswell and Clark (2011) described the structured questionnaire as providing the required format for the control and effective coding for the quantitative data. The instruments developed for each variable (leadership effectiveness, functional design, collaboration and reward system) were sourced from previous research (Khan & Wisner, 2019) and further assessed for reliability using the Cronbach alpha reliability tool at a benchmark of 0.70 (Neuman, 2011). The results for this test are presented on table 1 accordingly.

Table 1: Cronbach alpha reliability

Variables	Items	Study values
Leadership Effectiveness	4	0.889
Functional Design	4	0.945
Collaboration	4	0.951
Reward Systems	4	0.839

Source: Survey Data, 2021

DATA PRESENTATION AND ANALYSIS

The field work detailed a distribution of 99 questionnaire copies; however, only 96 were successfully retrieved, cleaned and utilized in the study.

Univariate Data Analysis

Table 2: Distribution for the variables of the study

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Leader	96	3.0677	.93434	-.800	.246	-.516	.488
Function	96	3.7240	1.06899	-1.164	.246	.186	.488
Collaborate	96	3.4427	1.00883	-.939	.246	.058	.488
System	96	2.4948	.64785	1.221	.246	5.794	.488
Valid N (listwise)	96						

Source: Survey Data, 2021

Based on the analysis for the variables of interest, results show that leadership effectiveness ($x = 3.0677$) design ($x = 3.7240$) and collaboration ($x = 3.4427$) have substantial mean outcomes, whereas the distribution for reward systems ($x = 2.4948$) appears to be weaker. The result demonstrates substantiality of agreement to manifestations of leadership effectiveness, functional design and collaboration but however indicate weak practices – probably due to inconsistencies with expectations – as concerns reward system. This as such suggests a poor or weak reward management system with possible outcomes such as pay disparity or other associated in consistencies.

Bivariate Data Analysis

Table 3: Test for the Relationship between Procurement and Inter-Functional Coordination

		Leader	Function	Collaborate	System	
Spearman's rho	Leader	Correlation Coefficient	1.000	.501**	.723**	.513**
		Sig. (2-tailed)	.	.000	.000	.000
		N	96	96	96	96
	Function	Correlation Coefficient	.501**	1.000	.592**	.423**
		Sig. (2-tailed)	.000	.	.000	.000
		N	96	96	96	96
	Collaborate	Correlation Coefficient	.723**	.592**	1.000	.655**
		Sig. (2-tailed)	.000	.000	.	.000
		N	96	96	96	96
	System	Correlation Coefficient	.513**	.423**	.655**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	96	96	96	96

Source: Survey Data, 2021

- i. What is the relationship between leadership effectiveness and functional design functional design in multinational oil and gas firms in Nigeria?
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- iii. What is the relationship between leadership effectiveness and reward system in multinational oil and gas firms in Nigeria?

The result from the analysis shows that for the relationship between leadership effectiveness and functional design, given question 1, $\rho = 0.501$ indicating a moderate relationship, question 2 on the relationship between leadership effectiveness and collaboration $\rho = 0.723$; and question 3 on the relationship between leadership effectiveness and reward systems, $\rho = 0.513$; the evidence show that leadership effectiveness has a moderate relationship with functional design, a higher and more evident relationship with collaboration and a moderate relationship with reward systems; hence a varied impact but yet substantial and positive relationship with inter-functional coordination in multinational oil and gas firms in the Nigeria.

The result for the test on the relationship between leadership effectiveness and the measures of inter-functional coordination show that leadership effectiveness significantly impacts and influences all three measures of inter-functional coordination. The result from the analysis reveals that leadership effectiveness is significantly correlated with functional design ($P_v = 0.000$), collaboration ($P_v = 0.000$) and reward systems ($P_v = 0.000$). Thus, it is observed that leadership effectiveness significantly enhances outcomes of functional design, collaboration and reward system given that the relationship between the variables is also noted to be positive; thus, given the test outcome, all previous null hypotheses were rejected and the findings stated as:

- i. There is a significant relationship between leadership effectiveness and functional design in multinational oil and gas firms in Nigeria
- ii. There is a significant relationship between leadership effectiveness and collaboration in multinational oil and gas firms in Nigeria
- iii. There is a significant relationship between leadership effectiveness and reward system in multinational oil and gas firms in Nigeria

DISCUSSION OF THE FINDINGS

Evidence from the test shows that leadership effectiveness significantly promotes outcomes of inter-functional coordination and in that way, impacts positively on measures such as functional design, collaboration and reward system in multinational oil and gas firms in the South-south of Nigeria. This result indicates that leaders play pivotal role in organizational and group outcomes. The finding reinforces the views of Wholey (2019) who identified leadership as principally concerned with the capacity to connect with significant others and offer clear and well defined direction for their groups. In this manner, leaders must be able to drive and motivate their subordinates and group members to be more open and accommodating of others within the same organization (Karadas & Karatepe, 2019).

The link between leadership effectiveness and inter-functional coordination is such that identifies the leader as central to the integration of groups within the workplace. This position also agrees with those of Kwon (2019) who argued that dynamic leaders are such that apply themselves to bridging the differences between various groups – ensuring that members and groups of the organization are able to cooperate in a substantial and productive way. The findings of this study as such validate the positions of previous scholars such as Jyoti and Rani (2017) who suggested that organizations focus on strengthening their internal ties and the connection between the various groups in order to harness the benefits of the organization. This is as Kwon (2019) argued that relationships are important and serve to facilitate unity and oneness in terms of decision-making and its outcomes within the organization.

CONCLUSION

The findings of this study are as such that validate and as such reinforce the criticality of leadership effectiveness for improved internal cohesion between functions and organizational groups. Thus it was concluded that the development and structuring of leadership for improved effectiveness, advances the substantial navigation of the internal workings and settings between groups and functions, and by that facilitates outcomes of interfunctional coordination such as functional design, collaboration and reward system in multinational oil and gas firms in Nigeria

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