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Abiodun Kolawole Oyetunji

Lancaster University, [a.oyetunji@lancaster.ac.uk](mailto:a.oyetunji@lancaster.ac.uk)

John Adebisi

Northumbria University, [jonadebisi@gmail.com](mailto:jonadebisi@gmail.com)

Nathaniel Ayinde Olatunde

University of Benin, [nathaniel.olatunde@uniben.edu](mailto:nathaniel.olatunde@uniben.edu)

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# Leadership Behaviour and Worker Performance in the Nigerian Construction Industry



**ABIODUN KOLAWOLE OYETUNJI**  
LANCASTER UNIVERISTY  
LANCASTER, UNITED KINGDOM



**JOHN ADEBIYI**  
NORTHUMBRIA UNIVERSITY  
NEWCASTLE UPON TYNE, UNITED KINGDOM



**NATHANIEL AYINDE OLATUNDE**  
UNIVERSITY OF BENIN  
EDO STATE, NIGERIA

## **Abstract**

*Leadership is a dynamic process in which an individual influences others to contribute to the achievement of an assigned task. This paper investigates leadership behaviour and its impact on construction workers' performance in Lagos, Nigeria. Purposive sampling technique was adopted to select 50 site-supervisors and 250 construction-workers involved in simple construction works. An investigation was carried out using a questionnaire survey method. The leadership variables investigated were ranked, regressed, and correlated to worker performance. From the primary data analysis, leadership behaviour, exhibited by supervisors, was found to influence the site workers' commitment to achieving the goal of the construction projects. The most exhibited leadership behaviour on the studied construction site is transformational leadership behaviour with an overall mean score of 4.09. There also exists a positive linear correlation of transactional leadership behaviour with construction worker performance. Findings revealed that the adoption of laissez-faire leadership behaviour results in negative correlation with construction worker performance. The study concludes that the success of construction projects depends on the project manager and its employees; leadership qualities, therefore, are critical to the construction industry participants to ensure the timely delivery of construction works.*

## **Introduction**

Leadership exists on many levels throughout all aspects of society. What motivates leaders is the overall accomplishment of the organizational goal. Leadership is the process of influencing others to attain a common goal (Wehrich et al, 2008; Robbins & Coulter, 2010). The construction industry has been perceived as dominant in moving societies towards sustainable development (Tabassi, 2016). The construction leaders and/or managers involved may improve the sustainable performance of sustainable projects by influencing or even transforming their subordinates. The leadership skills exhibited in the sector are critical for the success of any construction project (Amirali, 2016). In achieving the project goal, some leaders prefer the use of a people-centered approach, while others prefer a production-centered approach. Alkahtani (2015) stated that the choice of the preferred behaviour depends on such factors as an employee's acceptance of the leader, readiness

for a task, the leader's personal qualities, and the organization's customs and ethics. Therefore, leaders must possess the distinct skill to detect and identify the dependent factors of the organizational environment and subsequently make a judgmental decision to help precipitate organizational success in terms of the project's timely delivery.

Leadership behaviour is the way by which leadership functions are implemented (Mullins, 2000). A leader with only one form of leadership style can be successful in a situation demanding such specific leadership style whereas a diverse range of styles will guarantee success because of the dynamics of the construction industry (Liphadzi et al, 2015). The leadership traits of an individual depend not only on personal abilities and characteristics, but also on situational and environmental characteristics (Messick & Kramer, 2004). Glantz (2002) emphasized the need to employ the leadership behaviour that best suits an organization. This is because bad leadership behavior can make an organization to perform poorly than expected.

Exhibition of leadership traits on the construction site is a complex and often subjective issue. Geller (2008) asserts that poor construction site leadership will influence project performance, profit margin, worker performance, and commitment. Achieving organizational goals lies with workers since their performance depends on the leadership behaviour demonstrated (Hughes & Ferrett, 2010).

Leadership style and the way the project – as well as subordinates – are managed, can result in improved productivity and steer the project towards continuity. Despite the focus of research on leadership construct in business, marketing, management, and manufacturing disciplines, there is still a paucity of academic reviews on leadership behaviour as it influences worker performance on construction sites towards achieving sustainability in the Nigerian construction industry. It, therefore, becomes imperative to fill this gap. The main objective of this paper is to explore the relationship between three identified leadership style practices and construction worker performance in the Nigerian construction industry. The research theme focuses particularly on activities in Lagos, Nigeria. This study examines three forms of leadership and their adoption within construction sites and assesses the extent to which they influence worker performance on construction projects within this capital city.

## **Overview of Leadership Behaviour and its Influence on Productivity**

According to Cole (1996), leadership is a dynamic process in which an individual influences others to contribute to the achievement of an assigned task. In the opinion of Murphy (1996), leaders are people “to whom others turn when missions need to be upheld, breakthroughs made, and performance goals reached on time and within budget.” Leaders identify the need for and implement change, align people, establish direction, inspire, build teams, share decision-making, communicate vision, and mentor and train subordinates while demonstrating a high level of integrity in professional dealings (Zenger & Folkman, 2002; Skipper & Bell, 2006). Therefore, leaders motivate, align, and empower people towards achieving common goals (Naoum, 2011).

Leadership and employee job satisfaction and performance have emerged in recent times as an important discipline in industrial management (Achua & Lussier, 2010). Research concerning supervisor leadership behaviour and construction worker performance conducted particularly in developing countries such as Nigeria, has been limited, whereas,

leadership skills and behaviour have become a prerequisite for a successful organization in the 21<sup>st</sup>-century business environment. Organizational productivity, profitability and worker performance can only be enhanced through effective leadership and leaders' behaviour (Lee & Austin, 2011a, b; Cooper, 2011). Previous studies (Bronkhorst et al, 2015; Jyoti & Bhau, 2015; Kim & Yoon, 2015; Newland et al, 2015) showed that transformational leadership has had a positive influence on worker motivation, self-efficacy, creativity, and organization performance. Organizational leadership behaviour is a factor that plays an important role in improving or impeding individual interest and commitment. It is a dominant factor that inspires employee behaviour and attitudes. Consequently, leadership behaviour at all levels of management in an organisation, has been suggested to be a critical factor in determining organizational success. In this manner, Hopkins (2007) concludes that organizational leaders have a significant impact on profit, productivity, and worker performance.

Achua and Lussier (2010) asserted that a significant relationship exists between organizational success and supervisor leadership behaviours. The construction industry needs leaders who possess the skill to influence, motivate and align workers towards achieving organizational goals. However, it has been found that when leaders lose focus, it results in poor performance. The inappropriate leadership qualities pose a negative influence on workers' commitment and performance on construction sites (Sunindijo & Zou, 2012). Bass and Bass (2008) suggested that leaders with transformational leadership behaviour promote trust and employee-management relationship. According to Zohar (2002), site supervisor who demonstrate transformational leadership behaviour build trust and team spirit among the workforce. On the other hand, leaders with transactional leadership behaviour will also achieve employee commitment and performance (Bass & Bass, 2008). Conversely, leaders who exhibit laissez-faire leadership behaviour have negative consequences in terms of the organization's productivity, profit and workers' performance (Yukl, 2011). Transactional leadership, on the other hand, enhance the job fulfilment and organization identification compared with transformational leadership (Epitropaki & Martin, 2005; LePine, et al, 2015). Transformational leaders help individuals to adopt organizational change (Bommer et al, 2004). On the contrary, leaders who employ laissez-faire leadership behaviour are considered least effective and have a negative impact on follower performance outcomes and productivity (Yahaya & Ebrahim, 2016).

## **Transformational Leadership Behaviour**

According to Bass (1990), "transformational leaders motivate followers to be better as they concentrate on teamwork rather than individual interests." This leadership behaviour defines both leader and follower roles and includes followers in the leadership process and states that effective leadership involves leading others to be innovative and promote the continual discovery of new ideas to solve problems. To motivate or inspire people to work toward a common goal could be cumbersome. Research suggests that leaders need to possess qualities that facilitate followers to transform from one situation to another (Shamir et al, 1993). Transformational leadership can thus motivate workers to go beyond self-interest to pursue goals and encourage productivity. It encourages workers to accomplish more than what is expected and to motivate them to relinquish self-interest for the overall good of the organization (Barnett et al, 2001).

Achua and Lussier (2010) argue that transformational leadership behaviour allows for empowerment, inspiration, and motivation of subordinates/workers, often resulting in

readiness to undertake risks and exact remarkably high effort and commitment. Yukl (2010) and Lutchman et al. (2012) suggest that transformational leadership behaviour of frontline managers encourages trust and openness in an enabling work environment. Transformational leaders cause followers to trust, admire, and respect them (Bass & Steidlmeier, 1998). This type of leadership assists in capacity building, generates self-confidence, and fosters personal development. These sets of leaders are charismatic, considerate, inspirational, and often imbue followers with a sense of purposeful determination. They articulate and share goals, developing a common understanding of an attractive future (Achua & Lussier, 2010). Lutchman et al (2012) notes that those who exhibit transformational leadership qualities are transparent, sincere, and demonstrate a type of integrity that can be used in resolving complex issues within the construction industry. Northouse (2010) points out that this leadership behaviour focuses on the organisation and workers' collective values and interest.

### **Transactional Leadership Behaviour**

According to Northouse (2010), the transactional leadership model of Blanchard and Hershey is widely used today for developing the interpersonal skills of managers and supervisors. It has been argued that the development of leadership skills among frontline managers and supervisors could influence their leadership qualities, thereby creating a better manner of dealing with workers designed to increase productivity, strengthen worker commitment, and heighten performance levels. This type of leadership, as argued by Achua and Lussier (2010), refers to those individuals who offer motivational challenges or mete out punishment to followers due to low performance or who fail to meet required standards.

This brand of leader is better equipped to gain worker compliance, set productivity goals, monitor worker performance, and offer support. These leaders successfully gage follower potentials and respond to them by creating a symbiotic link between work and remuneration. According to Couto (2007), leaders possess the power to correct, evaluate, train, and reward workers based on productivity. However, Lutchman et al (2012) argues that the transactional leadership model may not be effective in a diverse workforce such as what often exists at construction sites. This view is shared by Geller (2008) who states that transactional leadership behaviour may not be ideal for construction site management because of cultural variations among workers.

### **Laissez-faire Leadership Behaviour**

Wefald and Katz (2007) refer to this type of leadership behaviour as passive in nature. There is no authentic development of a relationship between the followers and the leader. The leader's involvement in decision-making is insignificant as it allows individuals to make their own decisions, even though the leaders are responsible for whatever outcomes occur. Laissez-faire leadership represents a non-transactional leadership behaviour as actions are delayed, essential decisions are not rendered, responsibilities are ignored, and authority is unexploited. The style is also known as the "hands-off" approach as the manager provides little or no direction, thereby giving the employees unnecessary freedom. The employees possess the authority to make decisions, determine goals, and resolve issues all on their own. This style of leadership is the opposite of an authoritarian style as with this style, there is no identifiable leadership involved at all, allowing the employee to behave in whatever manner chosen. There is a state of confusion with no targets or direction with this

leadership style. This could be attributed to why workers' performance is substandard (Marturano & Gosling, 2008).

Table 1 shows the features exhibited by transactional, transformational and laissez-faire leadership.

**Table 1: Transformational, Transactional and Laissez-Faire Leadership Model**

Transformational	Transactional	Laissez-Faire
<ul style="list-style-type: none"> <li>• Influence to change worker attributes and behaviour</li> <li>• Inspire workers and others to perform at higher levels</li> <li>• Acknowledges each worker for his/her contributions</li> <li>• Able to motivate followers to perform above expectations.</li> <li>• Act as role models for employees</li> <li>• Challenge the intellect of workers to get new ideas and transformations</li> </ul> <p>Bass and Avolio (2004); Robbins and Judge (2009)</p>	<ul style="list-style-type: none"> <li>• Motivate followers to identify goals by clarifying role and task requirements</li> <li>• Rewards are only based on outcomes and the focus is on close management and guidance of activities</li> <li>• Control through rule compliance and maintaining stability within the organization rather than promoting change</li> <li>• Watches and searches for deviations from rules and standards before undertaking corrective measures</li> <li>• Focuses on intervention only after a mistake has been made</li> </ul> <p>Daft (2005); Robbins and Judge (2009)</p>	<ul style="list-style-type: none"> <li>• Leaders will fail to prompt their employees to exceed base production levels</li> <li>• Abdicates responsibilities and avoids decision-making</li> </ul> <p>Bass and Avolio (1997)</p>

\*Source: Author's compilation (2018)

## Assessment of Leadership Behaviour and Worker Performance in the Construction Industry

Effective leadership is an important tool to the successful performance of any firm and business sector – including the construction industry (Liphadzi et al, 2015). According to Harvey and Ashworth (1993), the construction industry is imbued with unique distinguishing characteristics – e.g., project specifications, project life-cycles, contractual arrangements, and environmental factors – which collectively call for a particular brand of guiding leadership. While Film and Yule (2004) categorically state that a leader's behaviour can motivate and inspire workers to achieve exceptional performance, there is a paucity of studies which focus upon the construction industry per se. The reason for this dearth of research can be attributed to a lack of knowledge about the industry proper (Langford et al., 1995). However, what has resulted from the studies in existence can be relegated to two general maxims:

1. *Effective leadership is vital, though no leadership behaviour can be deemed successful in all situations (Bass, 1997); and*
2. *Leaders must exert extensive and pervasive influence over their workers to improve workplace productivity to ultimately achieve organizational success (Lutchman et al., 2012).*



On construction sites, it is ostensibly the supervisor or team leader who is the pivotal force standing between management and the workforce. Thus, it is this person to whom the industry looks to effectively control construction activities and encourage exceptional worker performance.

A construction project is comprised of a multitude of organizations. Individual or groups from several parent organizations are all drawn together for a short period of time related to a specific task. Thereafter, the project-based organization is disbanded upon the completion of that task. The project-based nature of the construction industry – with its temporary multi-organizations – will almost certainly have an important influence on the managerial leadership behaviour exhibited by professionals working in the industry. While Cleland (1995) argues that project leadership should be appropriate to the project situation as leadership is a continuous and flexible process, Naum (2001) states that large capital investment projects coupled with the high complexity of decision-related issues can require different leadership behaviour. Further, Nicholas (1990) suggests that the most effective leadership behaviour depends on project circumstances, especially with respect to project duration and intensity of work done.

Mangham (2006) reports that communication between managers and workers is inextricably associated with employee commitment and performance. Workers feel a sense of belonging and investment in a project when they are consulted on decisions concerning their overall participation. Participative relationships enable workers to contribute to efforts which serve to positively shape the organization. Additionally, Flin and Yule (2004) observe that cooperative supervisory-workgroup relationships and participative management behaviour are rated as the most important predictors for creating harmony between workers and supervisors and generally shaping worker performance. When a leader incentivizes production through rewards and bonuses, such leader exhibits what is termed as transactional leadership behaviour (Yukl, 2010).

Effective control and supervision of the workforce are very important for maintaining and sustaining organisational standards and compliance. However, Northouse (2010) and Naum (2011) emphasize that the differences in various leadership styles impact leader behaviour. Diverse leadership behaviour brings about varied consequences, thereby having a direct or indirect impact on employee attitude and workplace behaviour. The extensive use of subcontracting is another factor that can impact project leadership behaviour. Naum (2001) suggests that the relationship between a company's procurement method and leadership behaviour is the proportion of sub-contracting against direct labour employment on project sites. In this vein, Bresnen et al (1986) demonstrates how task-oriented forms of leader behaviour are more appropriate where subcontracted labour forms the bulk of the workforce. Hence, it can be justified that construction professionals need to consider and weigh the efficacy of different leadership styles with respect to different stages of a project lifecycle.

According to Bresnen et al (1986), the temporary nature of project cycles may have a bearing upon an understanding of leadership within the construction sector. Leadership behaviour changes as the project progress through its life cycle. During the phases of the construction process, leadership behaviour involved may need to allow for more debates, fine-tuning, and deliberation. For instance, during the construction phases, there may be a more structured and dominant rule. Similarly, the environment in which leadership is

exercised is also influential in shaping the leadership behaviour of people who occupy managerial positions in construction settings. Overall, it is difficult to determine the most appropriate leadership behaviour to conform to each situation of project development. Thus, leaders may have to switch from one behaviour to another or mix the elements of different behaviours until the right balance between concerns for tasks and people is attained (Naum, 2001).

## Methodology

This study is carried out to examine whether supervisor leadership behaviours exhibited in construction settings has any significant impact on construction site worker performance. The process of the research conducted began with a careful review of the literature as it provided a basis for the identification of leadership behaviour.

The study population consisted of supervisors and site workers in Lagos, Nigeria. The data for the study was collected from supervisors and site workers drawn from construction firms in Lagos, Nigeria. There is no known database for the category of respondents, thus, the sample 100 supervisors and 400 site workers were conveniently and purposively adopted as a representation of the population. Polit and Hungler (1993) state that quantitative research may involve surveying designed to obtain information from a sample of people by means of self-reporting, whereby those individuals selected respond to a sequence of questions posited.

A multifactor-structured questionnaire was administered as non-probabilistic convenience and random sampling technique was used in the selection of the participants across construction sites to assess the leadership behaviour adopted and its influence on construction site worker productivity. The questionnaire was comprised of statements to which respondents were required to choose the action that best described the way they behaved and not the way they believed they should act.

The questionnaire was structured to assess the transactional, laissez-faire, and transformational forms of leadership, and to measure the performance of the employees on their given task. The independent variables consisted of leadership behaviours while worker performance was the dependent variable. The questionnaire instrument ensured uniformity and permitted an objective comparison of the result. Ten (10) supervisors were randomly selected for interviews, as this gave them ample opportunity for extensive expression. The objective was to validate the responses from the questionnaire necessary to satisfy all the demands of the study and to clarify any ambiguities identified. Out of the total questionnaires administered, only 50 emanating from the supervisors and 250 from the site workers were retrieved and considered valid for the analysis. Data acquired from the research instruments were statistically analyzed using Pearson product moment correlation and regression analysis.

## Results and Discussion

*Table 2: Characteristics of the Respondents*

Characteristics	Frequency	Percentage
<i>Age</i>		
Below 25 years	0	0.00
25 – 30 years	25	8.33



<b>31 – 35 years</b>	53	17.67
<b>36 – 40 years</b>	141	47.00
<b>41 – 45 years</b>	46	15.33
<b>Above 45 years</b>	35	11.67
<b>Total</b>	<b>300</b>	<b>100.00</b>
<b><i>Years of Experience</i></b>		
<b>2 years and below</b>	102	34.00
<b>3 – 5 years</b>	35	11.67
<b>6 – 8 years</b>	64	21.33
<b>9 – 11 years</b>	58	19.33
<b>12 years above</b>	41	13.67
<b>Total</b>	300	100.00
<b><i>Certification</i></b>		
<b>FSLC</b>	36	12.00
<b>SSCE</b>	72	24.00
<b>Trade Test</b>	45	15.00
<b>OND/NCE</b>	93	31.00
<b>HND/BSC</b>	54	18.00
<b>Total</b>	300	100.00

\*Source: Field Survey (2018)

The respondents' socio-demographics details are represented in *Table 2*. The findings showed that the respondents in the age bracket of 20 to 30 years constituted 25(8.33%) of the sample, 31-45 years were 53(17.67%) while 141(47.00%) were 36-40 years. The data also revealed that 46(15.33%) and 35(11.67%) were of the age brackets 41-45 years and older than 45 years, respectively. With respect to education certification levels, 36(12.00%) had attained a primary education (First School Leaving Certificate), 72(24.00%) had secondary education (Senior Secondary Certificate Examination), 45(15.00%) had achieved a trade test certificate, 93(31.00%) were National Diploma/National Certificate Examination holders, and 54(18.00%) were Higher National Diploma/Bachelor's degree holders. Regarding experience levels, 102(34.00%) of the respondents' years of experience was 2 years or less, 35(11.67%) had between 3 to 5 years of experience, 64(21.33%) between 6 to 8 years, 58(19.33%), between 9 to 11 years, and the remainder 41(13.67%) exceeded 11 years. The inference from *Table 1* suggests that the respondents were mature, with adequate educational status and years of experience in the construction industry necessary to provide reliable information to attain the goal of this research.

**Table 3: Extent of Leadership Behaviour on Construction Site Works**

<b>Leadership Behaviour</b>	<b>Character Measurements</b>	<b>Mean</b>	<b>Rank</b>	<b>Overall Rank</b>
<b>Transformational</b>	Inspire workers and others to perform at a higher level	4.62	1 <sup>st</sup>	1 <sup>st</sup>
	Act as role models for employees	3.86	4 <sup>th</sup>	
	Challenge the intellect of workers to get new ideas and transformations	4.40	3 <sup>rd</sup>	
	Acknowledging workers for their contributions	4.48	2 <sup>nd</sup>	
	Able to motivate followers to perform above expectations	3.67	5 <sup>th</sup>	
	Influence to change workers' attributes and behaviour	3.52	6 <sup>th</sup>	
	<b>Overall Mean</b>	<b>4.09</b>		
<b>Transactional</b>	Rewards are based on outcomes and the focus is on close management guidance of activities	4.42	1 <sup>st</sup>	2 <sup>nd</sup>

	Watches and searches for deviations from rules and standards before taking corrective measures	3.92	3 <sup>rd</sup>	
	Focusing on intervention after a mistake has been made	3.88	4 <sup>th</sup>	
	Control through rule compliance and maintaining stability within the organization rather than promoting change	3.48	5 <sup>th</sup>	
	Motivate followers in the direction of established goals by clarifying role and task requirements	4.08	2 <sup>nd</sup>	
	<b>Overall Mean</b>	<b>3.96</b>		
<b>Laissez-faire</b>	Abdicates his responsibilities	3.46	1 <sup>st</sup>	3 <sup>rd</sup>
	Avoids making decision	3.32	2 <sup>nd</sup>	
	Does not allow employees to go above and beyond the call of duty	3.10	3 <sup>rd</sup>	
	<b>Overall Mean</b>	<b>3.29</b>		

\*Source: Data Analysis (2018)

As shown in *Table 3*, the mean scores for transformational leadership behavioural traits were all above 3.50, averaging to the overall mean score of 4.09. This clearly indicates that the construction site workers agree that transformational leadership behaviours are exhibited by the leadership in site work activities; the descriptors “inspire workers and others to perform at a higher level” as well as “acknowledging workers for their contributions” represented the most exhibited transformational leadership behaviours. The mean scores for transactional leadership behavioural traits were above 3.50 (except for control through rule compliance and maintaining stability within the organization rather than promoting change), averaging to the overall mean score of 3.96. This indicates that the construction site workers agree that transactional leadership behaviours are exhibited by the leadership in site work activities; the descriptors “rewards are only based on outcomes and the focus is on close management guidance of activities” as well as “motivate followers in the direction of established goals by clarifying role and task requirements” were the most exhibited transactional leadership behaviours. The mean scores for all laissez-faire leadership behaviours were all below 3.50, averaging to the overall mean score of 3.29. This clearly indicates that the construction site workers disagree that laissez-faire leadership behaviours are exhibited by the leadership in site work activities. These findings are revealing, especially understanding that Turner and Pearce (2011) indicate that leadership styles are key to successful performance of construction firms and Zhang (2009) notes that the relationship between leadership styles and project success may depend on the type of project. However, regardless of the project type, leadership styles of the leaders play a considerable part in project success.

**Table 4: Regression Coefficient of the Impact of Transformational Leadership on Worker Performance on Construction Sites**

	Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	
	1	.684 <sup>a</sup>	0.468	0.466	4.27	
<b>a. Predictors: (constant). Transformational Leadership</b>						
<b>Analysis of Variance on the Impact of Transformational Leadership on Worker Performance on Construction Sites</b>						
	Model	Sum of Squares	df	Mean Square	F	Sig
<i>1</i>	Regression	6806.728	2	3403.364	186.341	0.000 <sup>a</sup>
	Residual	7725.756	288	18.264		
	Total	14532.484				

*a. Predictors: (constant). Transformational Leadership*

*b. Dependent variable: Construction Site Worker Performance*

**Coefficient of Variation on the Impact of Transformational Leadership on Worker Performance on Construction Sites**

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(constant)	50.971	1.273		40.035	0.000
	<b>Transformational</b>	0.175	0.20	0.360	8.660	

*a. Dependent Variable: Construction Site Worker Performance*

\*Source: Field Survey (2018)

The result of the impact of transformational leadership behaviour on the performance of construction site workers is presented in *Table 4*. The statistical analysis revealed that because of the coefficient of determination (r-square), 46.8% of the total variation in construction site worker performance is explained by transformational leadership behaviour. The results of the regression analysis also showed a positive impact of transformational leadership behaviour on organisational performance. This is evidenced with  $\beta$  value of 0.175,  $t$  calculated = 8.660,  $t$  tabulated = 1.96,  $p < 0.05$ .

**Table 5: Regression Coefficient of the Impact of Transactional Leadership on Worker Performance on Construction Sites**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	
1	0.705 <sup>a</sup>	0.496	0.494	5.44	

a. Predictors: (constant). **Transactional Leadership**

**Analysis of Variance on the Impact of Transactional Leadership on Worker Performance on Construction Sites**

Model	Sum of Squares	Df	Mean Square	F	Sig
1 Regression	5303.499	2	5303.499	179.451	0.000 <sup>a</sup>
Residual	5378.827	288	29.554		
Total	10682.326				

a. Predictors: (constant). **Transactional Leadership**

**b. Dependent variable: Construction Site Worker Performance**

**Coefficient of Variation on the Impact of Transactional Leadership on Worker Performance on Construction Sites**

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(constant)	3.223	1.432		2.251	0.026
	<b>Transactional</b>	0.386	0.029	0.705	13.396	

**a. Dependent Variable: Construction Site Worker Performance**

\*Source: Field Survey (2018)

*Table 5* shows the result of the impact of transactional leadership behaviour on construction site worker performance. The data analysis revealed that based on the coefficient of determination (r-square), 49.6% of the total variation in construction site worker performance was explained by transactional leadership behaviour. The results of the regression analysis also showed a positive impact of transactional leadership behaviour on organisational performance. ( $\beta = 0.386$ ,  $t$  calculated = 13.396,  $t$  tabulated = 1.96,  $p < 0.05$ ).

**Table 6: Regression coefficient of the impact of laissez-faire leadership on worker performance on construction sites**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	
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	1	238 <sup>a</sup>	0.057	0.052	5.69	
a. Predictors: (constant). <b>Laissez-faire Leadership</b>						
<b>Analysis of Variance on the Impact of Laissez-faire Leadership on Worker Performance on Construction Sites</b>						
	<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig</b>
1	Regression	823.865	2	411.932	12.711	0.000 <sup>a</sup>
	Residual	13708.620	288	32.408		
	Total	14532.484				
a. Predictors: (constant). <b>Laissez-faire Leadership</b>						
b. Dependent variable: <b>Construction site worker performance</b>						
<b>Coefficient of Variation on the Impact of Laissez-faire Leadership on Worker Performance on Construction Sites</b>						
	<b>Model</b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig</b>
		B	Std. Error	Beta		
1	(constant)	51.922	1.366		38.008	0.00
	<b>Laissez-faire</b>	-0.021	0.17	-0.47	-1.239	0.216
a. Dependent Variable: <b>Construction Site Worker Performance</b>						

\*Source: Field Survey (2018)

Table 6 shows the result of the impact of laissez-faire leadership behaviour on construction site worker performance. The table reveals that based on the coefficient of determination (r-square), 5.7% of the total variation in construction site worker performance was explained by laissez-faire leadership behaviour. The results of the regression analysis also showed a negative impact of laissez-faire leadership behaviour on organisational performance. ( $\beta = -0.021$ , t calculated = -1.239, t tabulated = 1.96,  $p > 0.05$ )

**Table 7: Pearson Product Moment Correlation Coefficient Between Transformational Leadership Behaviour and Construction Site Worker Performance**

	Transformational Leadership Behaviour	Construction Worker Performance
<b>Transformational</b>	Pearson Correlation	0.046
	Sig. (2-tailed)	0.000
<b>Performance</b>	Pearson Correlation	0.046
	Sig. (2-tailed)	0.000

\*Source: Field Survey (2018)

The correlation matrix in Table 7 shows the level of the linear relationship between transformational leadership behaviour and construction site worker performance. The *Pearson Product Moment Correlation* shows that there exists a relationship between transformational leadership behaviour and construction worker performance. The results indicate that the adoption of transformational leadership behaviour is positively correlated with the performance of the construction site workers. This finding is consistent with that of Bass and Avolio (1997) which suggest that employee performance is associated with a high level of transformational leadership employed. It also corroborates that of Rejas et al (2006) that transformational leadership behaviour has a positive impact on performance but disagrees with that of Obiwuru et al (2011) that transformational leadership behaviour has a positive but insignificant effect on performance. The reason that might be adduced for the divergent in the result can be attributed to the difference in size of the firm sampled by

existing research which focused upon the small-scale enterprise and not the construction sector which this study investigated.

**Table 8: Pearson Product Moment Correlation Coefficient Between Transactional Leadership Behaviour and Construction Site Worker Performance**

		Transactional Leadership Behaviour	Construction Worker Performance
<b>Transactional</b>	Pearson Correlation		0.044
	Sig. (2-tailed)		0.002
<b>Performance</b>	Pearson Correlation	0.044	
	Sig. (2-tailed)	0.002	

\*Source: Field Survey (2018)

The correlation matrix in *Table 8* shows the level of the linear relationship between transactional leadership behaviour and construction site worker performance. The Pearson Product Moment Correlation shows that the level of transactional leadership behaviour adopted has a positive correlation with construction site worker performance. This finding supports the opinion of Obiwuru et al (2011) that transactional leadership behaviour has a significant positive effect on employee performance but differs from that of Shahhosseini et al (2013) which reveals that transactional leadership behaviour has no significant relationship with job performance. The reason for the divergent in view by Shahhosseini et al (2013) can be attributed to the fact that the study considers workers emotional intelligence and the leadership behaviour adopted which is outside the scope of this study.

**Table 9: Pearson Product Moment Correlation Coefficient Between Laissez-Faire Leadership Behaviour and Construction Site Worker Performance**

		Laissez-faire Leadership Behaviour	Construction Worker Performance
<b>Laissez-faire</b>	Pearson Correlation	1	-0.284
	Sig. (2-tailed)		0.099
<b>Performance</b>	Pearson Correlation	-0.284	1
	Sig. (2-tailed)	0.099	

\*Source: Field Survey (2018)

The correlation matrix in *Table 9* shows the level of the linear relationship between laissez-faire leadership behaviour and construction site worker performance. The *Pearson Product Moment Correlation* indicates that when laissez-faire leadership behaviour adopted on the construction site, it would lead to a negative correlation with construction site worker performance. This implies that the more laissez-faire leadership behaviour is adopted, the more a worker's performance diminishes. This finding corroborates Spinelli (2006) and Tsigu and Rao (2015) findings that laissez-faire leadership behaviour does not enhance worker performance.

## Conclusion and Recommendations

The success of construction projects depends on the project manager and employees. Effective leadership qualities are important skills that everyone in the construction industry should possess as they enhance the timely delivery of construction works. Most construction projects fail despite the substantial capital investment and use of established project

techniques, as the leadership competency required for successful project performance has been found lacking. Successful management can be viewed as one that possesses intelligence, initiative, imagination, capacity to make immediate decisions, and the ability to motivate subordinates. Construction professionals and organizations will benefit from employing persons who have well-developed, interpersonal traits that can make the industry achieve its original goal. The usage or misapplication of these skills during project execution can impact project outcomes either in a positive or negative manner. As a result, the recommendations are that:

- i. The construction industry needs to employ workers who possess leadership traits, who can lead the team both efficiently and effectively to achieve the goal of the project and that of the construction firm.
- ii. The top management of construction firms needs to recognize the factors influencing the performance of its workers and adopt tactical options to address them.
- iii. Construction firms can apply the combination of both transactional and transformational leadership behaviours but not laissez-faire leadership style when carrying out its administrative duties. This should be done with careful consideration of the nature and condition of the project and its associated tasks.

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## About the Authors

**Abiodun Kolawole Oyetunji** is a doctoral student in Lancaster Environment Centre, Lancaster University, United Kingdom. He currently lectures in the Department of Estate Management, University of Benin. He is an Associate member of both the Nigerian Institution of Estate Surveyors and Valuers (NIESV) and the Institute of Strategic Management (ISMN). He has several published peer-reviewed articles in both local and international journal to his credit.

He can be contacted at [a.oyetunji@lancaster.ac.uk](mailto:a.oyetunji@lancaster.ac.uk).

**John Adebiji** graduated with a degree in Quantity Surveying from the Federal University of Technology, Minna, and obtained a masters in project management with commendation from Northumbria University, United Kingdom. He is experienced in managing projects across various industries but holds a keen interest in research related to construction management and administration.

He can be contacted at [jonadebiyi@gmail.com](mailto:jonadebiyi@gmail.com).

**Nathaniel Ayinde Olatunde** is currently a lecturer and researcher in the Department of Quantity Surveying, University of Benin, Edo State, Nigeria. He is a member of the Nigerian Institute of Quantity Surveyors (MNIQS) as well as a Registered Quantity Surveyor. He has published 15 peer-reviewed journal articles both at the national and international arena. He is at the advanced stage of his PhD in the Department of Quantity Surveying at Obafemi Awolowo, Ile- Ife, Nigeria.

He can be contacted at [nathaniel.olatunde@uniben.edu](mailto:nathaniel.olatunde@uniben.edu).