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Posted Date: 10 May 2023

doi: 10.20944/preprints202305.0744.v1

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Assessing the Effectiveness of Motivational Schemes on Construction Project Performance in Lagos State

Abeeb Kilanko* and Henry Onukwube

Department of Building, University of Lagos, Nigeria; onukwube123456@unilag.edu.ng (H.O.);
*Correspondence: abeeb.kilanko@gmail.com (A.K.)

Abstract: In order to remain competitive in the highly competitive construction industry, it is crucial for construction organizations to continually improve their overall performance, as project performance is a key determinant of their relevance. Despite the industry's competitiveness and risk, it has been reported that the construction industry has the lowest return margins compared to other industries (Jackson, 1999), suggesting that the project performance of construction organizations in the industry has not been up to par. This issue can be attributed to several factors, with motivation being the primary factor. Unfortunately, motivation is often disregarded in the construction industry due to the short duration of many construction projects and the high rate of employee turnover. The impact of employee dissatisfaction and related work attitudinal problems on performance in the construction industry is a matter of concern, particularly in developing countries where working conditions may be unappealing. The severity of this issue cannot be overstated. The objective of this research is to evaluate the effectiveness of motivational techniques in enhancing project performance in Nigeria. The study employed a survey research design and targeted the management staff of construction firms in Lagos State, Nigeria. The questionnaire was used to collect data, and the respondents were purposively selected from the population. Data analysis was conducted using percentage, mean ranking, and chi-square. The findings reveal that the opportunity to learn new skills, with a mean score of 0.85, and wage increment, with a mean score of 0.82, were the most widely adopted motivational techniques for management staff and skilled labor, respectively, in construction firms. Additionally, the study found that most of the motivational schemes tested did not produce statistically significant results, indicating low adoption and limited effectiveness in enhancing project performance. As a result, it is suggested that construction companies in Nigeria should implement and enforce financial and non-financial incentives to enhance the performance of their employees and consequently, improve project performance.

Keywords: Motivation; Project performance; Motivational techniques; Employee turnover

Background

According to Mee-Edoiye and Andawei (2000), the civil and building construction industry is the largest employer of labor, while Arditi and Morkhtar (2000) opined that its output accounts for half of the gross capital and three to eight percent of the Gross Domestic Product (GDP) in most countries. This highlights the significant role that the construction industry plays in a country's economic development. However, the performance of construction employees has a major impact on the industry's output, making workforce management a critical factor in its success (Onososen and Onatayo, 2023).

Thwala and Monese (2008) defined motivation as a driving force that fosters willingness among employees to collaborate with their colleagues. Kazaz, Manisali, and Ulubeyli (2008) suggest that maintaining motivation requires creating and sustaining an environment that promotes harmony and balance within the entire work group for the benefit of the company as a whole. Honary et al. (2006) found that motivation generates effort and dynamism within an organization and that there is a significant correlation between motivating factors, such as employee welfare, wages, work conditions, and the nature of work, and increased personnel performance.

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In order to remain competitive in the highly competitive construction industry, it is crucial for construction organizations to continually improve their overall performance, as project performance is a key determinant of their relevance. Despite the industry's competitiveness and risk, it has been reported that the construction industry has the lowest return margins compared to other industries (Jackson, 1999), suggesting that the project performance of construction organizations in the industry has not been up to par. This issue can be attributed to several factors, with motivation being the primary factor. Unfortunately, motivation is often disregarded in the construction industry due to the short duration of many construction projects and the high rate of employee turnover. The impact of employee dissatisfaction and related work attitudinal problems on performance in the construction industry is a matter of concern, particularly in developing countries where working conditions may be unappealing. This is evident in Nigeria where in recent times the labour front has been plagued with a plethora of industrial unrests which has led to unsatisfactory work environment (Adetayo & Onatayo, 2023).

Against this backdrop, the present study investigates how motivation affects project performance in terms of cost, time, and quality of deliverables. The primary objectives of the study are twofold: first, to identify the financial and non-financial motivational strategies employed by construction companies to enhance project performance, and second, to evaluate the efficacy of these motivational schemes in improving project performance.

Literature Review

According to Young (2000), motivation is the internal drive that determines an individual's level of effort, direction, and persistence in their work. Similarly, Gonzalez (1991) noted that understanding individual behavior is crucial to comprehending motivation and the techniques and strategies involved. Regardless of a person's behavior, there is always some underlying stimulus. This raises the question of what motivation is in relation to human behavior.

Bartol and Martin (1998) view motivation as a potent mechanism that strengthens behavior and triggers the inclination to persist. Put simply, motivation is an internal drive to fulfill an unmet need and attain a specific goal. It is also a process that commences with a physiological or psychological requirement that stimulates action toward an objective.

Additionally, these definitions imply that there is a requirement for an "invisible force" that propels individuals to act in response.

Theories of Motivation

Motivation is a subject that is explored by various motivational theories, each providing its own interpretation of motivation, albeit with some degree of overlap. For the current study, Maslow's hierarchy of needs theory and Herzberg's hygiene theory serve as the fundamental frameworks..

Maslow Hierarchy of Needs Theory

Maslow (1954) categorizes human desires or needs in a hierarchical order of importance that comprises physiological, safety, belongingness, esteem, and self-realization needs, with each level being of increasing significance. According to Maslow's theory, a need can never be completely fulfilled, but once a need is almost met, it no longer serves as a motivator. To motivate an individual, Maslow suggests that one must first determine their position on the hierarchical pyramid and then focus on meeting their needs at that particular level (Robbins, 2001).

Physiological needs: At the base of Maslow's needs hierarchy are physiological needs, which are the most fundamental and lowest level of needs. These include satisfying basic requirements such as food, water, air, and shelter. Maslow argues that organizations must compensate employees with a salary that allows them to afford basic living conditions. This is because according to Maslow (1943), employees who are hungry or lacking basic necessities will have a hard time making meaningful contributions to their organization.

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Safety needs: this occupies the second level of needs. Safety needs arise once physiological needs have been fulfilled. They pertain to the need for a secure working environment that is free from any harm or threats. Organizations can fulfill these needs by providing employees with safety equipment, such as health insurance plans and fire protection measures. The underlying reason for this is that employees require a working environment that is devoid of danger to perform their tasks effectively without fear of harm (Onososen et al, 2023).

Social Needs: The third level of needs is the social need which arises once safety needs have been fulfilled. It pertains to the desire to be affiliated, i.e., the need to be loved and accepted by others. To fulfill these needs, organizations often promote employees' participation in social events such as picnics, among others.

Esteem Need: The fourth level of needs is the esteem need which involves the desire for self-respect and the approval of others. To meet these needs, organizations may introduce awards, banquets, and other forms of recognition to acknowledge outstanding achievements.

Self – actualization: The topmost level of the needs hierarchy is self-actualization, which pertains to the need to achieve one's full potential and become the best version of oneself. Organizations recognize that self-actualized employees are highly valuable assets to their human resources

Herzberg's Motivation and Hygiene Theory

Herzberg's theory assumes that the existence of hygiene factors can prevent employees from experiencing job dissatisfaction. These hygiene factors are extrinsic factors such as technical supervision, interpersonal relationships, physical working conditions, salary, company policies, administrative practices, benefits, physiological needs, and job security. However, maintaining hygiene factors only ensures that employees are not dissatisfied or frustrated with their job. Currently, there is a consensus that the key characteristic that distinguishes motivated employee behavior from other types of behavior is that it is goal-directed.

According to Bandura (2003), the key to motivating individuals lies in the goal-directed nature of their behavior. Jones (as cited in the source) proposed that motivation encompasses the initiation, energy, sustenance, direction, and termination of behavior, as well as the associated subjective experiences within the organization. This statement can be represented graphically as a model of the employee motivation process and its impact on performance.

Motivational Schemes Available in The Construction Industry.

Financial incentives: According to Rose and Manley (2011), the utilization of financial incentives and rewards is viewed as a primary method for enhancing the outcomes of construction projects in the built environment. These incentives are commonly used to decrease contract costs, minimize contract duration, and attain performance benchmarks in areas such as quality, efficiency, and productivity. Due to their short-term nature, financial incentives are widely acknowledged as the most effective type of incentive in the construction industry. The three types of financial incentives identified by Rose and Manley (2011) are cost savings sharing, schedule incentives, and performance bonuses. In addition to these, other financial incentives often employed in the construction sector are profit sharing, commission increments, profit-related pay, and fringe benefits.

Non-financial incentives

According to Ameh (2012), non-financial incentives commonly adopted can be categorized based on workers' job roles. Skilled and semi-skilled workers may be offered incentives such as personal protective equipment, the opportunity to observe national holidays, and free transportation. For management staff, additional benefits such as a pension scheme, provision of accommodation, and a company car may be provided.

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Project Performance

Mohammed and Abdullahi (2011) cited Onukwube, Iyagba, and Fajana's definition of performance as behavior that can be assessed based on its contribution to organizational effectiveness. According to Pheng and Chuan (2006), project success is achieved when a project is completed within an acceptable timeframe, cost, and quality while meeting client satisfaction. The achievement of project success is influenced by the effective performance of project indicators.

A wide range of performance indicators can be used to measure and assess project performance across various dimensions such as time, performance, health, and safety, as identified by Cheung et al. (2004) and DETR (2000). However, time, cost, and quality are considered the primary dimensions for evaluating project performance and are therefore the main focus of this study.

Time factors.

Iyer and Jha (2006) suggest that the most important factor in evaluating project performance is time overrun, as it is closely related to cost overrun. If time overrun can be controlled, it can prevent a major part of cost overrun. Time is a crucial benchmark for assessing project performance and the efficiency of the project organization, according to Chan and Kumaraswamy (2002). Factors related to time that contribute to project success include the project manager's competence, supportive owner and top management, monitoring, feedback and coordination, favorable working conditions, and commitment of all project participants. On the other hand, factors that contribute to failure include conflict among project participants, the project manager's ignorance, a hostile socioeconomic environment, the owner's incompetence, the indecisiveness of project (Oladiran and Damilola, 2018).

Quality Factors.

While project quality is a crucial aspect of performance evaluation, it is often neglected as project managers prioritize meeting specified cost and time targets, according to Iyer and Jha (2006). Consequently, the production of quality outputs is sometimes only given a half-hearted effort. However, Barnes (1987) argued that quality control for construction, installation, and engineering projects should be treated with the same level of attention as time and cost management. The significance of quality cannot be overstated, as the delivery of substandard projects can have severe consequences, including reduced productivity, additional expenses, rework, repair, and retesting in the short term (Oladiran and Onatayo, 2019). In the long run, it can also harm the company's reputation. Previous research has identified success factors for quality, including the project manager's competence, top management support, monitoring and feedback by project participants, and interaction among project participants. On the other hand, failure factors include conflict among project participants, adverse socio-economic and climatic conditions, the project manager's ignorance and lack of knowledge, faulty project conceptualization, and aggressive competition during tendering.

Research Method

The survey research design was employed for this study, with a questionnaire serving as the primary data collection tool to gather information on motivation. The questionnaire was divided into three sections (A, B, and C) and a total of 60 copies were distributed, with 40 being returned. The study focused on motivation and its impact on project performance within the construction industry, specifically within the Lagos metropolis. The target population included management staff of construction and contracting firms, as well as skilled construction workers. The questionnaire included three parts: demographic information of the respondents, financial and non-financial incentives utilized by the firm and their impact on worker performance, and questions on the effectiveness of motivational techniques on project performance. Data analysis was performed using the Statistical Package for Social Sciences (SPSS), with mean item scores used as the primary statistical tool.

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Result and Discussion

Table 1 displays the profile of the respondents, revealing that 27.5% are Builders, 20% are Quantity Surveyors, 20% are Architects, 27.5% are Engineers, and 5% are Estate Surveyors and Valuers. In terms of work experience, 15% have 1-5 years of experience, 52.5% have 6-10 years of experience, 27.5% have 11-15 years of experience, while the remaining 5% have 16-20 years of experience. As for educational qualifications, 37.5% hold a B.Sc, 7.5% have a PGD, 42.5% have an M.Sc, 2.5% have an MPhil, 2.5% have a PhD, and 2.5% did not provide a response. In terms of professional affiliations, 25% are members of the Nigerian Institute of Building, 22.5% are members of the Nigerian Institute of Quantity Surveyors, 17.5% are members of the Nigerian

Institute of Architects, 22.5% are members of the Nigerian Society of Engineers, 7.5% are members of the Nigerian Institute of Estate Surveyors and Valuers, 2.5% indicated other affiliations, while 2.5% did not provide a response. Regarding membership status, 2.5% are Fellows, 50% are Corporate Members, 37.5% are Graduate Members, and 10% are Associate Members. The data suggests that the majority of respondents are Corporate Members, followed by Graduate Members at 37.5%.

Table 1. Respondents' profile.

Position	Highest Academic Qualification	Professional Body	Professional Background	Years of Experience
Site Engineer (27.5%) Builder (27.5%) Architect (20%) Quantitysurveyor (20%) Estate Surveyors (5%)	MPHIL/PHD (5%) HND (16 %) BSc./B.Tech(37.5%) MSc.(42.5%) PGD(7.5%)	NIOB (25%) NIQS (22.5%) NIA (17.5%) NSE (22.5%) PMI (2%) NIESV(7.5%)	Architecture (15%) Building (22%) Quantity Surveying (18.5%) Civil Engineer(40.5) Mechanical Engineering(2) Project Management(2)	1-5 (15%) 6-10(52.5%) 11-15(27.5%) 16-20(5%)

Note that NIOB means Nigerian Institute of Building; NIQS means Nigerian Institute of Quantity Surveying; NIA means Nigerian Institute of Architect; NSE means Nigerian Society of Engineers; NIESV means Nigerian Institute of Estate Surveyors and valuers.

Objective One: Table 2 presents the mean item scores for financial and non-financial motivational schemes adopted by construction firms to enhance project performance. The table shows that the most significantly adopted incentive scheme is the opportunity to learn new skills, with a mean item score (M.I.S) of 0.85. This is followed closely by wage increment, with an M.I.S of 0.83. This implies that these two incentive schemes are perceived as the most effective by construction firms, leading to their high rate of adoption.

The table also indicates that a moderate proportion of construction firms adopt incentive schemes such as provision of company car, vacation leave, provision of personal protective equipment (PPE), performance bonus, support for family medical leave, and 'Finish and go', with M.I.S values ranging from 0.70 to 0.79. These schemes are perceived as moderately effective in motivating workers. On the other hand, cash gift, profit sharing, and fringe benefits are ranked low in adoption, with M.I.S values ranging from 0.66 to 0.69, indicating that they are not commonly used by construction firms. The provision of residential accommodation was ranked the lowest, with an M.I.S of 0.58, indicating that it is a moderately adopted incentive scheme. Overall, the study aimed to identify the significant financial and non-financial motivational schemes used by construction firms to improve project performance, and Table 2 provides insights into the adoption rates of various incentive schemes in the Lagos metropolis.

 doi:10.20944/preprints202305.0744.v1

Table 2. Mean item score of financial and non-financial incentives.

Variables	MIS	RANK
Opportunity to learn new skills	0.85	1
Wage increment	0.83	2
Provision of company car	0.79	3
Vacation leave	0.78	4
Provision of personal protective equipment (PPE)	0.75	5
Performance bonus	0.73	6
Support for family medical leave	0.72	7
'Finish and go'	0.70	8
Cash gift	0.69	9
Profit sharing	0.68	10
Fringe benefits	0.66	11
Provision of residential accommodation	0.58	12

Hypothesis One

Results in Table 3 indicates that financial and non-financial incentive schemes are not significantly adopted by construction firms. This is because they have their chi-square calculated value(x2 cal= 12.89) less than their chi-square tabulated value(x2tab= 28.869). Thus, the null hypothesis is adopted and the alternative hypothesis is rejected for this case. The inference from this result is that motivational incentive schemes are not significantly adopted by construction firms towards increased project performance.

Table 3. Motivational schemes adopted by construction companies in Nigeria are not significant.

	X2cal	*DF*	*X2tab*	*P-Value*	*Sig*	*Decision*
Financial and non-financial incentives	**12.89**	**18**	**28.869**	**0.798**	**NS**	**Accept H0**

Objective two: To assess the effectiveness of the identified motivational schemes in increasing project performance.

Table 4 displays the mean item score of motivational schemes identified to improve project performance. The results reveal that the opportunity to learn new skills received the highest ranking with a M.I.S value of 0.85. This suggests that it was perceived as a highly effective incentive scheme for enhancing project performance. This is due to the fact that offering workers opportunities to learn new skills can boost their self-esteem and motivation, which ultimately leads to better job performance.

The second highest ranked incentive scheme was wage increment, with a M.I.S value of 0.83, indicating it was also perceived as highly effective in increasing project performance.

Following closely were other incentive schemes like the provision of company cars (M.I.S value of 0.79), vacation leave (M.I.S value of 0.78), provision of personal protective equipment (PPE) (M.I.S value of 0.75), performance bonus (M.I.S value of 0.73), support for family medical leave (M.I.S value of 0.72), and 'Finish and go' (M.I.S value of 0.70). These schemes were considered to have significant effectiveness in improving project performance.

Cash gift (M.I.S value of 0.69), profit sharing (M.I.S value of 0.68), and fringe benefits (M.I.S value of 0.66) were perceived to have moderate effectiveness in increasing project performance. On the other hand, the provision of residential accommodation received the lowest ranking with a M.I.S value of 0.58, indicating it was moderately effective in enhancing project performance in the construction industry.

Table 4. mean item score of motivation schemes.

Variables	MIS	RANK
Opportunity to learn new skills	0.85	1
Wage increment	0.83	2
Provision of company car	0.79	3
Vacation leave	0.78	4
Provision of personal protective equipment (PPE)	0.75	5
Performance bonus	0.73	6
Support for family medical leave	0.72	7
'Finish and go'	0.70	8
Cash gift	0.69	9
Profit sha ring	0.68	10
Fringe benefits	0.66	11
Provision of residential accommodation	0.58	12

Hypothesis Two

The second hypothesis postulated for this study is that there are no significant effects that adopted motivational schemes have on project performance. Results in Table 4.8 indicates that 'finish and go' has its chi-square calculated value (x2 cal=20.69) higher than its chi-square tabulated value (x2 tab=18.307), it means that alternative hypothesis (H1) is to be accepted for this case. Cash gift, Wage increment, Profit sharing, Fringe benefits, Performance bonus, Provision of personal protective equipment(PPE), Provision of residential accommodation, Support for family medical needs, Provision of company car, Vacation leave, Opportunity to learn new skills have their chi-square calculated values (x2 cal= 13.25, 4.02, 10.14, 16.67, 8.27, 5.79, 13.92, 9.36, 9.62, 10.44, 9.69) lower than their chi-square tabulated values (x2 tab= 15.507, 12.592, 15.507, 18.307, 15.507, 15.507 15.507, 12.592, 15.507, 15.507, 15.507), thus the null hypothesis is to be accepted for these cases. The inference from this result is that majority of the motivational schemes yielded to the null hypothesis which could mean low adoption and thus low significance in increasing project performance.

Table 5. Chi-square test result on effectiveness of the adopted motivational schemes in increasing project performance.

Financial and Non-Financial Incentives	X2 cal	DF	X2tab	p-value	Sig	Decision
Cash gift	13.25	8	15.507	0.104	NS	Accept H0
Wage increment	4.02	6	12.592	0.674	NS	Accept H0
Profit sharing	10.14	8	15.507	0.255	NS	Accept H0
Fringe benefits	16.67	10	18.307	0.082	NS	Accept H0
Performance bonus	8.27	8	15.507	0.407	NS	Accept H0
Provision of personal protective equipment (PPE)	5.79	8	15.507	0.671	NS	Accept H0
'finish and go'	20.69	10	18.307	0.023	S	Accept H1
Provision of residential accommodation	13.92	8	15.507	0.084	NS	Accept H0
Support for family medical needs	9.36	6	12.592	0.155	NS	Accept H0
Provision of company car	9.62	8	15.507	0.292	NS	Accept H0
Vacation leave	10.44	8	15.507	0.236	NS	Accept H0
Opportunity to learn new skills	9.69	8	15.507	0.139	NS	Accept H0

Conclusions

The study set out to investigate the effect of motivational schemes on project performance. The objectives are to identify the significant financial and non-financial motivational schemes adopted by construction firms towards improved project performance and to assess the effectiveness of the

identified motivational schemes in increasing project performance. The following conclusions have thus been made upon the completion of the study:

- The significant motivational schemes are; cash gift, wage increment, profit sharing, fringe benefits, performance bonus, provision of personal protective equipment (PPE), Finish and go, Provision of residential accommodation, Support for family medical needs, provision of family car, vacation leave and opportunity to learn new skills. This indicates that construction companies in Nigeria adopt financial and non –financial incentives towards the improvement of their workers' performance and thus, overall project performance.
- Opportunity to learn new skills was ranked highest having a very significant percentage value of 60%. This show that this incentive is very effective in improving the performance of workers as it motivates them to perform their duties at the optimum level. It was followed by wage increment which had a very significant percentage value of 45.0. This shows that workers perceived this incentive as one which is very pivotal in increasing workers´ performance and thus, overall project performance. Performance bonus subsequently followed with a very significant percentage value of 42.50. From, the foregoing, it can be deduced that performance bonus was perceived to be also very effective and this is true, in that motivation is inextricably related to bevaiour and if a person is rewarded for his performance, his performance will improve and collectively lead to an increase in project performance. The other adopted incentives like cash gift, profit sharing, fringe benefits, provision of personal protective equipment (PPE), Finish and go, Provision of residential accommodation, Support for family medical needs, provision of family car, and vacation leave were also found to be quite significant towards the improvement of project performance.

Recommendations

Based on the conclusions drawn from the study, the following recommendations are being made to improve project performance in the construction industry through the use of financial and non-financial incentives.

1. Adoption and use of financial and non-financial incentives by construction companies: There is need for construction companies in Nigeria to adopt and ensure the use of financial and non-financial incentives for the improvement of the performance of their workers and consequently, project performance. Whilst the performance of workers is on the increase, there would also be increase in project performance as both are inter-related. It is quite understandable that the construction organizations cannot possibly adopt all the financial incentives as the study has shown, it is therefore recommended that ´opportunity to learn new skills´, wage increment and performance bonus should be considered by any construction organization as the major significant incentives.
2. There is also need for construction organizations to identify which incentive motivates a particular team. This is because, what motivates one worker might not be a motivator to another worker since their behavior and needs are different (motivation depends greatly on needs and behavior). There is need to educate and train project team leaders on the study of project team and behavior of the workers towards the improvement of project performance. It is therefore recommended that the study of human behavior and needs be taken as utmost priority for project team leaders.
3. The current study was limited to motivational schemes (financial and non-financial). Further research can be carried out on motivational techniques.

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