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RESEARCH ARTICLE

ASSESSING FACTORS IN IMPROVING PRODUCTIVITY OF CRAFTSMEN IN NORTH-EASTERN NIGERIA

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ABSTRACT

Motivation of craftsmen in the construction industry has become necessary due to the fact that their productivity in Nigeria have significantly dropped over the years. Political activities also tend to divert attention of youths away from these economically sustainable trade jobs. The aim of the research is to develop strategic ways of improving productivity of craftsmen in construction firms through various motivational techniques with the objective of examining whether the underperformance of craftsmen in construction firms was as a result of lack of motivation. The study randomly sampled 109 respondents across 12 construction firms from four states of Adamawa, Bauchi, Gombe and Taraba in the North–Eastern Nigeria. Structured questionnaire was used to obtain data and the data were analyzed using statistical package for social sciences (SPSS), simple percentage, mean and severity index. The study revealed that demotivation accounted for poor working rate in construction firms. Also the study identified twelve most severe factors that influence the productivity of craftsmen which were; effective supervision, training, overtime, teamwork, love, rewarding, salary increment, good working relationship, effective communication, job security, performance feedback and bonuses. The study recommends that construction firms should adopt motivational factors that had direct impact on craftsmen outputs. It was also recommends that there is need for adopting multidimensional approach on motivating craftsmen by combining two or more motivational factors at a time.

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INTRODUCTION

The importance of the construction industry in Nigeria to national development cannot be over-emphasized considering the fact that at least 50% of the investment in various development plans is primarily in construction (Okeola, 2009). The construction industry generally plays vital roles in the national economy due to the usage of its product such as road building and dam constructions for production of goods and services (Adjei, 2009). The output of the industry in Nigeria accounts for over 70% of the Gross National Product and therefore is the stimulator of the national economy (Olaloku, 1987). Lawal (2008) is of the opinion that the building and construction industry in Nigeria is the largest employer of labour. Olaloku (1987) quantitatively put the employment figure of the building and construction industry as close to one third of the total workforce.

A labour issue is vital and sensitive to the economic growth of a nation. No nation can do without labour resources. Even in developed economics no matter the level of automation of their industries, labour still remains the single most important factor of production (Lawal, 2008). In the same vein, the craftsmen constituted the main workforce of the construction firms. In the industry, craftsmen account for 40% of direct capital cost of large construction project and there is need to maximize the productivity of human resources (Thomas, 2006). The craftsmen ranged from block layers, carpenters, iron benders, electrician, masons to painters among others (Industrial Training Fund, 2005). The importance of motivation for construction craftsmen cannot be over-emphasized as many construction companies are adopting various financial and non-financial incentive schemes aimed at improving their productivity (Thomas, 2006). One of the key ingredients behind increasing productivity is the attitude and motivation of the craftsmen. Each craftsman is human and each one is motivated by something. In order to be successful, a construction company needs employees who act toward the

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goals of the organization and have strong desire to remain in the company. Such goal, loyalty and commitment may be generated by the motivation the employees receive. Measuring productivity for construction project is a complex task. Every project is unique in terms of design specification, delivery method, administration and participants. If the most important influencing factor in any contracting organization is identified, it can then be applied in order to upgrade the craftsmen job performance. To ensure improved productivity of construction craftsmen in the North-East, the large labour force has to be motivated using appropriate means. In more than 2-decades, the experience of Nigeria in the process of economic development has not been encouraging. Over dependence of Nigeria on the oil sector has contributed to her economic recession, in view of the fact that there is need to device other means of economic variables that will enhance the economy of the country (Okonjo, 2012). Construction industry is one of the sectors that employed larger percentage of Nigerian workforce both skilled and unskilled, and there are still capabilities of employing more people on daily basis, thus, the industry supposed to be a bailout from the problems of unemployment threatening the nation's economy. According to the reports of National Planning Commission (2011), manufacturing, building and construction industries in Nigeria, which traditionally have greater potential for employment generation, broadening the productive base of the economy and generating sustainable foreign exchange earnings and government revenues account for a mere 4.14% of gross output and 12.0% of employment, respectively.

Over the last seven years, certain efforts were put in place to restructure construction industries to yield more output in the economy. Prominent among these efforts is the wooing the foreign construction firms by creating conducive operating environment through policies and securities beef-up. The construction sector is yet to achieve the necessary structural changes required to jump-start the sustainable growth and development, aside unreliable and narrow productive base, the sector linkages to Gross Domestic Product are still weak (Oluwakiyesi, 2011). North-Eastern region of Nigeria was rated as the least economic developed region in Nigeria (National Planning Commission, 2011). Lack of unemployment has bedeviled the North-Eastern part of Nigeria by posing serious problems in the socio-economic development of the region and nation at large. If craftwork is motivated it will attract high number of unemployed teaming youth into the sector, which will in turn reduce unemployment rate and over dependence on white collar job, and hence increase in productivity.

Literature Review

Motivation

A large part of manager's task is getting things done through people having to identify what motivates people better. Motivation is the process of raising the morale of workers. It is a statement to the interest of a person in an activity for realization of project or organizational objective. Lam and Tang (2003) defined motivation as the force within individuals that drives them physiologically and psychologically to pursue one or more goals to fulfill their need or expectation. The issue

of employee motivation is important as it establishes a substantial foundation for higher performance level and less unproductive time (Smithers and Walker, 2000). Human motivation is a key for achieving excellence (Schrader and Steiner 1996). Numerous studies proved that productivity of worker is directly related with motivation. A worker who is highly motivated will input maximum efforts because of self-fulfillment from doing so, and resulting in high productivity (Lam and Tang, 2003).

Intrinsic Motivation

Intrinsic motivation refers to motivation that comes from inside an individual rather than from any external or outside rewards, such as money or grades. The motivation comes from the pleasure one gets from the task itself or from the sense of satisfaction in completing or even working on a task. The intrinsic factors are called motivators and are said to be the job satisfaction, which includes achievement of successes obtained and the nature of the work itself. Intrinsic factors are related to psychological reward such as the opportunity to use one's ability. Psychological reward is the one that can be determined by the action and behavior of the individual's managers (Thomas, 2006). Slowikowski (2009) expressed that the following factors can serve as intrinsic motivator for craftsmen; achievement from task accomplishment, recognition among colleagues, the difficulty or challenging nature of work itself, the sense of responsibility for getting the work done, advancement in experiences derived from difficult task and career growth or development as a result of accumulated experiences. All these factors can internally propel workers to do more.

Extrinsic Motivation

The extrinsic factor is said to be associated with the content of the work, which may produce job satisfaction or dissatisfaction among workers (Thomas, 2006). Lawal (2008) related extrinsic motivation to tangible reward such as salary, and fringe benefits, job security, promotion, contract of service, the working environment and the condition of service.

Productivity

Pieters (2009) defined productivity as the utilization of resources in producing a product or services. Prokopenko (1987) also defined productivity as the efficient use of the resources; labour, capital, land, material energy and information. Furthermore Lawal (2008) defined productivity as the relationship between the output generated by a production (or service) system and the input provided to create this output. Mathematically,

$$Productivity = \frac{output}{input}$$

Lawal (2008), indicated that productivity is complex due to involvement of many factors such as labour, capital, materials, tools/equipment, poor communication or relationship between worker and management, disorganized projects, poor supervision, lack of cooperation and communication between different craft, lack of worker participation in decision making process and unfair workload. He argued that most of these

factors severely affected productivity. The improvement in the construction productivity needs to be achieved through greater resource allocation and human resources efficiency effectiveness and engagement; increased innovation and technology diffusion productivity.

Craftsmen

Construction craftsmen are construction operatives who contribute skillfully with their hands in the practical realization of the project in the construction industry (Dantong, 2007). Craftsmen constitute Block layers, Carpenters, Iron-benders, Electrician, Mason Painters, Artesian (Industrial Training Fund, 2005). Construction industry has three cadre of manpower, which are closely interrelated and dependable. These are lower technician cadre, the middle level technical cadre and the professional cadre (Smithers and Walker, 2000). The lower level cadres are responsible for the physical assembly of element/component of building project under the supervision of a professional builder (Izam, 2011). The role of this lower cadre craftsmen is important in the development of the construction industry. It is estimated that craftsmen constitute over 70% of the total workforce on building project. The absence of these craftsmen may be the evidence where the end product of the construction industry bears a look characterized by poor quality, low productivity, late completion, cost overrun, high accident rate, poor work practice and conflict.

MATERIALS AND METHODS

130 questionnaires was shared to craftsmen 12 registered construction firms in four North-eastern states comprising Adamawa, Bauchi, Gombe and Taraba. The distributions were carefully stratified to trades of masonry, plumbing, carpentry electrical and iron bending. A total of 109 (91% responses) questionnaires was returned (see table 1). The Statistical Package for Social Sciences (SPSS) was used for analysis. A validity and reliability test was made and a comfortable coefficient value of 0.87 obtained. An Average Weighted Response (AWR) was also tested and a value of 4.23 (table 2) obtained to signify that poor working rate in construction firms are as a result of lack of motivation. Severity index was further tested and effective supervision was ranked first with SI value of 0.76 (table 3). Chi-square was used to test the hypothesis and a df of $0.04 < 0.05$ value (table 4) rejected the null that motivational factors do not significantly affect craftsmen's productivity in construction firms across the north-eastern Nigeria.

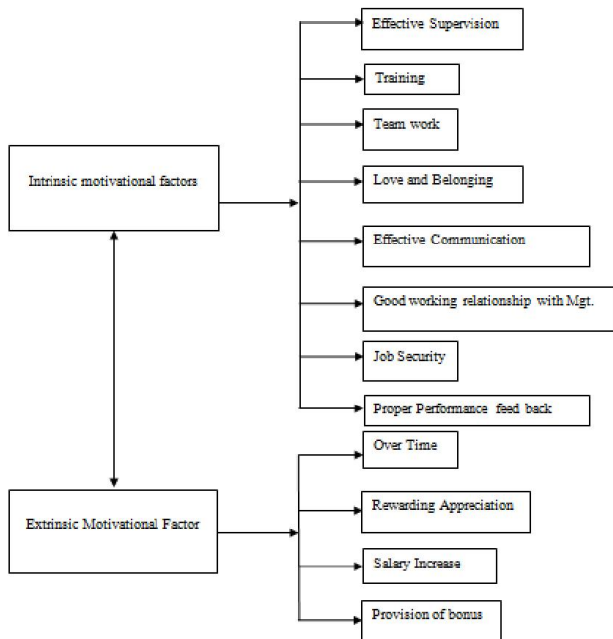
DISCUSSION

The results from Table 1 shows the distribution of respondent by trade, the table reveals that 23% of total sampled craftsmen were Masons, 25% Plumbers, 20% Electricians, 18% Carpenters, and 14% were Iron benders. Likewise, the results from Table 2 depicted the frequencies of craftsmen responses on their respective perceptions on the possibility of linking present poor working rate in various construction firms in North Eastern Nigeria to lack of motivation for craftsmen across these firms. 54% of the respondents strongly agreed that poor working rate can be attributed to lack of motivations.

28% agreed to the assertion that the poor working rate across construction firms in North Eastern Nigeria was as a result of lack of poorly motivated craftsmen. However, 10% and 6% of all sampled craftsmen disagreed to the assertion, they were of the view that poor working rate cannot be traced to lack of motivation, while 4% of all the sampled craftsmen declined responses as they neither agreed to the assertion nor disapprove the relationship between poor working rate and lack of motivation. Table 2 depicted the overall average weighted response (AWR) of 4.23, greater than 3.0, which is the base accepted value. This implies that the poor working rate can be seen as an aftermath of inadequacy of motivation for craftsmen. This finding is in accordance with conclusion of Olaloku (1987) that lack of motivation encourages low production and demotivation leads to a concise withdrawal from productivity ability. Thomas (2006) also concluded that employee dissatisfaction undermined their working rate while motivated workers yield more productivity than demotivate ones. Mbamali and Okotie (2012) noted that the craftsmen's role in the construction industry is significant in both developed and developing countries and that their motivation yields productivity and significant on economic growth. Table 3 presented the craftsmen's perceptions on possible motivational factors that directly enhanced productivities in the construction firms.

The severity index as established by Dantong (2007) is the product of frequency index (hygiene factors) and important index (motivator) for each identified motivational factors. In this survey, supervision by good leadership is ranked first in both severe factors and relative frequency index, with severity index 0.76 with 4.47% relative mean value respectively. Therefore supervision is critical to the success of execution of any construction project. To be successful, the supervisor must have a basic knowledge of his people and therefore set a good example for workers to be carried along. When workers are motivated, they work harder and this will boost their performance and hence increase productivity. Training of workers is ranked second among other factors in the severe factors and relative frequency index, with severity index 0.69 and with 4.3% relative mean value respectively. Mbamali and Okotie (2012) in their research found that providing training to employee was also rank second as the non-monetary motivational factor that affect productivity. Overtime is rank third for both severe factors and relative frequency index, with severity index 0.63 and with 4.09% relative mean value respectively. Smithers and Walker (2000) ranked overtime first, as the most used motivating factor in the construction industry. This shows how important overtime is in the construction industry. Teamwork is ranked fourth in both severe factors and relative frequency index, with severity index 0.61 and with 4.06% relative mean value respectively. Thus, this signifies that teamwork motivate craftsmen to work harder and hence increase their productivity. A team can be defined as a small number of people with complementary skills who are committed to a common purpose, set of performance goals and approach for which they hold themselves mutually accountable (Adjei, 2009). If the manager is to make the most effective use of staff, it is important to have an understanding of his team, it is necessary to recognize the nature of the human relationship and the function, roles and factors that

influence team performance and effectiveness. When selecting a team the most important thing is to look for those who are decent, honest, bright and capable. Other factors followed were love, rewarding appreciation, salary increase, good working relationship between management and lower cadre, effective communication among workers, job security, proper performance feedback and provision of end of year bonuses. Generally, the factors being identified by this study can be categorized into intrinsic and extrinsic. Intrinsic are those factors that are non-monetary while extrinsic are factors that needed little financial sacrifice from firms. A schematic representation is demonstrated in Figure 1.



Source: Field Survey (2013).

Figure 1. Extrinsic and Intrinsic Motivational Factors

Conclusion

Based on the findings of this study, it can be concluded that the craftsmen across various construction firms in North-Eastern part of Nigeria recognized that have been motivated by their employer can improve their productivity. Furthermore, it has been evident by this study that productivity depends on motivation while motivation may not necessarily depend on productivity. Among the conclusions drawn from this study is that not all the motivational factors could enhance productivity, hence the management of construction firms should identify hygiene factors and satisfiers factors (severe factors) to improve the working rate of craftsmen in their respective firms. It was also established that if construction industries can invest much on their craftsmen, they will get the best out of them with increased productivity. Investing in the development of crafts work in the north-east will certainly be a reason to discourage several youths joining the dreaded terrorist group (boko haram) that have wrecked so much havoc and backwardness in the region.

Recommendations

Among the recommendations based on the findings of this study are:

- In other to improve the productivity of craftsmen in the construction firms in the North Eastern Nigeria firms should adopt the following multinational factors; effective supervision, training, overtime and encouraging teamwork among workers.
- There is need for adopting multidimensional approach on motivating craftsmen by combining two or more motivational factors for craftsmen at a time (i.e. both intrinsic and extrinsic factors).

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Appendices

Results in Tables

Table 1. Distribution of Respondent's by Trade

Trade	Frequency	Percentage (%)
Mason	25	23
Plumber	27	25
Electrician	22	20
Carpenter	20	18
Iron Bender	15	14
Total	109	100

Source: Field Survey (2013).

Table 2. Respondents' Perception on either Poor Working Rate in Construction Firm was as a Result of Lack of Craftsmen Motivation

Responses	Frequency	Percentage	AWR
Strongly Agreed	59	54.0%	4.23
Agreed	30	28.0%	
Disagreed	10	9.0%	
Strongly Disagreed	6	6.0%	
Undecided	4	4.0%	
Total	109	100%	

Source: Field Survey (2013).

Table 3. Ranking of Motivational Factors that Directly Enhanced Craftsmen Productivity

S/n	Items	Frequency Index	Important Index	Severity Index (F.I x I.I)	Rank
1.	Effective supervision by leaders	0.8624	0.8752	0.7548	1
2.	Providing training to workers	0.8348	0.8348	0.6969	2
3.	Overtime(extra pay)	0.7889	0.8018	0.6326	3
4.	Team work	0.7828	0.7817	0.6119	4
5.	Love and belongings	0.7615	0.7633	0.5812	5
6.	Rewarding appreciation	0.7339	0.7413	0.5441	6
7.	Salary increase	0.6483	0.6605	0.4282	7
8.	Good working relationship	0.6758	0.6312	0.4266	8
9.	Effective Communication	0.6483	0.6458	0.4187	9
10.	Job security	0.6269	0.6661	0.4176	10
11.	Proper performance feedbacks	0.6207	0.6642	0.4123	11
12.	Provision of bonus such as end of the year Bonus	0.6177	0.6661	0.4114	12

Source: Field Survey (2013).

Table 4. The results of Chi-Square Analysis on Effect of Motivation on Craftsmen Working Rate

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.26 ^a	4	.000
Critical value	9.48		
N of Valid Cases	109		

a. 0 cells (00.0%) have expected count less than 5. The minimum expected count is 3.99.

Source: Field Survey (2013).
