

Critical Success Factors for Human Resource Management Practices in the Nigerian Construction Industry: A Delphi Approach

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Abstract

Different practices influence the construction industry. One of such is the human resource management practices (HRMPs) that enhance the performance and productivity of the human resource (HR). The choice of HRMPs is influenced by varied factors which are unknown in the Nigerian construction industry. Based on this contextual setting, the study assessed the critical success factors by establishing the influence of the different critical success factors (CSF) on HRMPs and determined the impact of each of the factors in the Nigerian construction industry. The study adopted the Delphi survey method of data collection that involves a structured questionnaire to solicit views of fifteen (15) experts, including professionals in the built environment, academics, and human resource/ personnel managers. The evaluation of the success factors was done by identifying the influence of each CSF on HRMPs; these factors were measured from no impact to very high impact. Mean, median, and standard deviation was utilized to analyze the data. The study findings indicate that out of all the nineteen (19) critical success factors evaluated, priorities of top management and the required working capital were ranked 1st among the CSF for HRMPs in the Nigerian construction industry. The Delphi study approach recommended that firms should prioritize management priorities and working capital availability since they are influential factors and have a very high impact in determining the choice of HRMPs in the construction industry. The study contributes to the body of knowledge on CSF for HRMPs in a developing country, especially the Nigerian construction industry.

Keywords

Construction Industry, Human Resource Management Practices, Critical Success Factors, Top Management Priorities, Working Capital.

1. Introduction

Human resource management practices (HRMPs) are a combination of practices "that are espoused to be internally consistent and reinforcing to achieve overarching results" (Lepak, Liao, Chung & Harden, 2006:221). These combinations of practices are referred to as bundles of HR practices utilized by organizations to achieve strategic goals (Boon, Den Hartog & Lepak, 2019). Combining practices rather than single practice helps to achieve performance in an organization, including the construction industry (Osibanjo & Adeniji, 2011; Wright & Boswell, 2002).

Evidence from literature suggested that the utilization of bundles of HR practices rather than individual HR practices brings about a strong relationship with performance (Combs, Liu, Hall & Ketchen, 2006). The bundle of HR practices promotes overarching goals (Jiang, Lepak, Han, Hang, Kim & Winkler, 2012); creates firms' synergy (Garg, Jiang & Lepak, 2020); helps to achieve a high system score (Becker & Huselid, 1998). Also, as noted by (Smith, Fischer & Fister, 2003; Garg et al., 2020), HRM practices of an organization include essential dimensions of the constructs that bring about accurate prediction. However, what exactly makes up the elements that will bring about bundles of HR practices has varied significantly over the years. In this study, these elements are the critical success factors (CSF) of HRMPs. Some known elements for HRMPs include company culture and structure, satisfactory

working environment, state-of-the-art availability of equipment, quality and timeliness of feedback, appraisal structure of the employee, health and safety of employees in the workplace (Chew, 2004; Elrehail, Harazneh, Abuhjeeleh, Alzghoul, Alnajdawi & Ibrahim, 2019). It could also be attributed to internal and external factors such as management priorities, required working capital, high turnover rate, and organisation size (Ozutku & Ozturkler, 2009; Kokkaew & Koompai, 2012; Andalib, Darun & Azizan, 2015; Prajapati, Pitroda & Vyas, 2015). These elements, among others, have been recognized and mentioned in literature as a set of elements for HRMPs. Previous studies, including (Ozutku & Ozturkler, 2009; Kokkaew & Koompai, 2012; Andalib et al., 2015; Prajapati et al., 2015), established that the required working capital and management priorities were most mentioned among the set of elements for HRMPs. However, in relation to the Nigerian construction industry, minimal research has identified HRMPs critical success factors. Based on this, the present research seeks to: identify the CSFs influencing the choice of HRMPs; and determine the impact of each of the factors in the Nigerian construction industry, which informs the objectives of the current study. This paper is structured as follows: first, previous studies on HRMPs CSF. Next, the research method is outlined and summarized. The results of the stated objectives, as well as the discussion, are reported. The final section of the study discusses the conclusion and recommendations for future research.

2. Literature on Human Resource Management Practices Critical Success Factors

HRMPs are activities that a consistent and coherent system utilized to recruit, develop, motivate, retain, and secure the most valued asset, the people, for organizational goals. However, the choice of these activities varies from one firm to another and is influenced by different factors. (Hofstede, 1993) observed that HRMPs are influenced by economic system, and political-legal system (government policies). The study of (Hofstede, 1993; Cantarello, Filippini & Nosella, 2012; Al-Sarayrah, Tarhini, Obeidat, Al-Salti & Kattoua, 2016; Obeidat, Al-Sarayrah, Tarhini, Al-Dmour, Al-Salti & Sweis, 2016) showed that national dimensions such as power distance, uncertainty avoidance, individualism, collectivism, masculinity, and femininity were factors influencing the choice of HRMPs. In their study, (Kane & Palmer, 1995) concluded that industry/sector characteristics, top management priorities, changes in technology, organizational mission, power and politics, and changes in the national economy are CSF that determine HRMPs. Previous studies mentioned internal and external factors as factors influencing HRMPs, which vary from industry to industry. For instance, (Ozutku & Ozturkler, 2009) noted that HRMP is influenced by internal and external factors such as top management priorities, corporate headquarter actions, and the sector or industry characteristics. Furthermore, (Andalib et al., 2015; Prajapati et al., 2015) classified top and line managers' priorities as an internal factor influencing the choice of HRMPs. Moreover, Kokkaew and Koompai (2012) informed that external factors influencing HRM practices in Thai construction companies are project size, structure and complexity of the project, and required working capital. Accordingly, in explaining the HRMPs CSF, (Sikora & Ferris, 2011) utilized the social context theory and the theory of planned behaviour. They posited that contextual/organizational and individual factors such as quality of HR and line manager competencies significantly impacted HRMPs.

Therefore, the literature reviewed showed that varied factors influence the choice of HRMPs. These factors are needed to ensure that organizations utilize bundles of practices that enhance the HR's performance and productivity in the construction industry. Also, the construction industry with a long-term plan needs to prepare HR for future changing business conditions. Finally, the disconnected studies reviewed were insufficient to explain CSF influencing the choice of a firm's human resource management practices holistically. However, a combination of the literature reviewed will give an all-inclusive view for investigating the key CSF for HRMPs in developing countries, a case of the Nigerian construction industry.

3. Methodology

In this study, both the literature review and Delphi method was utilized. The literature review assisted in identifying the CSF. At the same time, the latter was employed to seek panelists view on the CSF influencing the choice of HRMPs in the Nigerian construction industry. Also, the impact of the CSF on the Nigerian construction industry was determined in the present study.

The Delphi survey was conducted among fifteen (15) experts, including professionals such as engineers (4), builders (2), project managers (2), architects (2), quantity surveyors (2) in the built environment, and the HR/personnel managers (3) in the Nigerian construction industry. The experts were selected from across Southwest cities in Nigeria; Lagos (5), Osun (1), Ogun (2), Ondo (4), Oyo (1) states including the Federal Capital Territory (2). This assist in enriching the study by seeking varied opinions and knowledge across these cities in Nigeria. The Delphi method is an approach that involves the use of a copy of sets of questionnaires to gain consensus and produce feedback to participants who are experts in key areas (Habibi, Sarafrazi & Izadyar, 2014; Mazzucca, Weatherly, Morshed & Tabak, 2018). It is also based on a group rather than individual judgment (Ameyaw, Hu, Shan, Chan & Le, 2016). These experts are selected based on the following requirements: Knowledge: Must be knowledgeable in the field of construction/ project management, HRM and its practices; Academic qualification: Should possess at least a national diploma, a higher national diploma, a postgraduate diploma, a bachelor’s degree, a master’s degree or doctorate; Employment: Should have previously served or currently serve in a professional capacity or at a place of employment such as an agency, institution, company as an engineer, personnel manager/HR, project manager, architect, quantity surveyor, builder, an officer of an establishment that is involved in employee selection or the execution of construction contracts in Nigeria; Experience: The expert should possess a high level of theoretical and practical experience over the years in the subject area; Willingness: Selected members of the panel must be willing to participate fully in the entire Delphi study; Must be a member of a professional body.

In the first round, only close-ended questions were used in the Delphi study. The responses from round one of the study were analyzed, and the results formed the basis of round two. In the second round, the Delphi questions allowed the expert panelists to review and comment on CSF influencing the choice of HRMPs in the Nigerian construction industry, which the expert panelists proposed in round one of the Delphi study. Open-ended questions were used in the second round of the Delphi study to investigate the expert panelists' comments expressing agreement, disagreement, or clarification concerning proposed attributes that determine HRMPs in the Nigeria construction industry. In both rounds, frequencies and interquartile deviation (IQD) were used to measure the degree of consensus reached in the responses of the expert panelists. For each response, the group median was calculated. The group median was the appropriate measure of central tendency utilized in this study because it was found to be more suitable for the type of information collected. The results from the first round Delphi survey formed the second and final survey round questions. Hence, in the second round of the survey, the group median for each element was computed and sent back to expert panelists; they were asked to maintain the first-round response/ change it as informed by the group median of the first round. In all, fifteen (15) experts completed two rounds of the Delphi process as against nineteen (19) that started the Delphi survey. The size of the experts was sufficient based on the recommendations from scholars who have previously employed the Delphi techniques in previous studies. It was cited that 10 to 15 panelists could be adequate if the background of the panelists is homogenous (Delbecq, Van de Ven & Gustafson, 1975). Also, (Aigbavboa, 2013) utilized 15 expert panelists for a Delphi study on residential satisfaction. This makes a panel of 15 experts considered adequate, as seen in the present study.

The experts' opinions was analyzed using Microsoft Excel and calculated using the median, mean, standard deviation, and interquartile deviation with the adopted scale for measuring consensus (Table1). The adopted scale was based on a 10-point impact scale ranging from no impact to very high impact, where 1 and 2 represent no impact; 3 and 4 represent low impact; 5 and 6 represent medium impact; 7 and 8 represent high impact; 9 and 10 represent very high impact (Aigbavboa, 2013). The experts' credentials were kept confidential throughout the study.

Table 1: Adapted scales of consensus

Consensus	Median	Mean	Interquartile deviation (IQD)
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Strong	9-10	8-10	≤ 1 and $\geq 80\%$ (8-10)
Good	7-8.99	6-7.99	$\geq 1.1 \leq 2$ and $\geq 60\% \leq 79\%$ (6-7.99)
Weak	≤ 6.99	≤ 5.99	$\geq 2.1 \leq 3$ and $\leq 59\%$ (5.99)

4. Results and Discussions

The Delphi results give a summary of how consensus were achieved in both rounds as below:

The first objective identifies the critical success factors influencing the choice of HRMPs in the Nigerian construction industry. Based on this objective, the experts recognized nineteen (19) critical success variables to influence the choice of human resource management practices in the Nigerian construction industry. When evaluated, findings revealed that each identified factor had a median value falling within the very high impact (VHI: 9-10) and a high impact (HI: 7-8.99). Also, it was revealed that all nineteen (19) variables achieved consensus with IQD cut off ($\text{IQD} \leq 1$) score (See Table 2). This suggests strong consensus in the view of the expert panelists towards HRM practices CSF. The acknowledged critical factors comprised: firm top management priorities, working capital of the firm, masculinity (...achievement, courage, persistence, and material success), quality of HR in the firm, femininity (...relationships, humility, concern for others, and quality of life), adaptation to changes in technology, power distance (...extent to which employee accept that power in firms is unequally distributed), having organization mission/purpose, avoidance of uncertainty (...extent to which HR is uncomfortable with the uncertainty and vagueness), sustaining manager's competence, effective actions of corporate headquarters, project complexity of the firm, firm characteristics, the structure of the project, individualism (...workers who take care of themselves and direct families only), collectivism (...belief that group comes first and good of group should be ahead of individual), firm project size, adapting to politics and power issues, and economic situation of the country.

Further, the second objective determines the impact of each success factor of HRM practices in the Nigerian construction industry. Table 2 depicted the outcome of the analysis. It revealed that, out of the 19 CSF influencing HRM practices in the Nigerian construction industry, seven (7) had very high impact (VHI: 9.00–10.00) on HRMPs, while twelve (12) had high impact (HI: 7.00–8.99) based on the 10-point impact scale this study employed. However, none of the success factors was found not to have impacted HRMPs in the Nigerian construction industry. Also, the study revealed that strong consensus was achieved for all the nineteen (19) success factors as they obtained scores ranging from 0.00 to 1.00 based on their respective IQD scores.

Table 2: Critical success factors attributes

Sub-attributes	(M)	(\bar{x})	(σ_x)	(IQD)	(R)
Priorities of top management	9	9.00	0.76	1.00	1
Required working capital	9	8.73	1.33	0.50	2
Masculinity (...achievement, courage, persistence, and material success)	9	8.73	1.39	0.50	2
Quality of HR in the firm	9	8.67	1.45	0.50	4
Femininity (...relationships, humility, concern for others, and quality of life)	9	8.47	1.36	1.00	5
Changes in technology	9	8.40	1.30	1.00	6
Power distance (...extent to which employees accept that power in firms is unequally distributed)	9	8.40	1.35	1.00	6
Organisation mission/purpose	8	8.33	1.11	1.00	8
Uncertainty avoidance (...extent to which HR is uncomfortable with the uncertainty and vagueness)	8	8.33	0.90	1.00	8
Manager's competence	8	8.27	1.28	1.00	10
Actions of corporate headquarters	8	8.20	1.52	1.00	11
Project complexity	8	8.13	1.13	0.00	12

Firm characteristics	8	8.00	1.41	1.00	13
Structure of the project	8	7.60	1.76	1.00	14
Individualism (...workers who take care of themselves and direct families only)	8	7.60	0.91	1.00	14
Collectivism (...belief that group comes first and good of group should be ahead of individual interest and success)	8	7.33	1.84	1.00	16
Project size	8	7.33	1.29	1.00	16
Politics and issues of power	7	7.13	1.30	0.50	18
Economic situation	7	7.07	0.00	0.00	19

M = Median, \bar{x} = Mean, σ_x = Standard deviation, IQD = interquartile deviation, R = \bar{x} ranking

Specifically, the required working capital had a mean value of 8.73, indicating a high impact on HRMPs. This supports (Kokkaew & Koompai, 2012) assertion that external factors such as the availability of working capital influence HRM practices. Similarly, top management priorities with a mean value of 9.00 were scored to have a very high impact among the factors influencing the choice of firms' HRMPs. This is in line with (Kane & Palmer, 1995; Ozutku & Ozturkler, 2009) studies that top management priorities significantly influence HRMP. Further, changes in technology with a mean value of 8.40 scored a very high impact among the critical success factors. The finding is consistent with the finding of (Kane & Palmer, 1995) that variations in technology significantly impact the choice of HRMPs.

Moreover, the quality of HR attained a mean value of 8.67. This was found to be consistent with the views of Sikora and Ferris (2011), whose earlier study found this factor to have a significant impact on the choice of HRMPs. Furthermore, owing to the result of the finding of power distance with a mean value of 8.40, masculinity with a mean score of 8.73, and femininity with a value of 8.47 in influencing the choice of HRMPs in this study, which corroborates the previous studies of Hofstede (1993); Al-Sarayrah et al. (2016); Obeidat et al. (2016). In addition, the majority (12) of the factors also attained high impact (HI: 7.00-8.99) among the success factors influencing the choice of HRMPs. In contrast, none of the factors was found not to have had an impact among the success factors influencing the choice of HRMPs. It is noteworthy that the experts expressed no variability in views among the nineteen (19) factors concerning the economic situation. This factor had a standard deviation value of 0.00. This finding is consistent and corroborates most of the previous studies on HRMPs such as (Hofstede, 1993; Kane & Palmer, 1995; Andalib et al., 2015; Al-Sarayrah et al., 2016; Obeidat et al., 2016). To this end, factors identified from existing literature to have an impact on the choice of firms HRMP in other cultural contexts were found to have affected the Nigerian construction industry. Further, though none of the factors had been identified to not influence the success factors influencing the choice of HRMPs. Required working capital and priorities of top management were found to have had a very high impact among the success factors that influence the choice of HRMPs in the Nigerian construction industry. Others include quality of HR, motivation, changes in technology, power distance, masculinity, and femininity.

Moreover, the present economic condition in Nigeria could have affected HRM practices, especially in the construction industry. From the above discussions, it is evident that the findings of this study are largely consistent with the findings of previous studies on human resource management practices as mentioned above. Still, the relative impact values recorded for each factor differ. Thus, it is empirically proven that the experts' views on the CSF for HRMPs in other industries impact HRMPs in the Nigerian construction industry. Noteworthy, required working capital and top management priorities emerged first among the nineteen CSF for HRMPs in the Nigerian construction industry. While the economic situation of the country emerged 19th among the CSF influencing the choice of HRMPs.

5. Conclusion and Recommendations

This study assessed the critical success factors influencing the choice of HRMPs in the Nigerian construction industry. This was done using the Delphi technique. The study concludes that nineteen (19) critical success factors influence HRMPs based on objective one. Also, based on the second objective, the study concludes that, relatively, priorities of

top management and the required working capital of the organisation jointly emerged 1st among the CSF for HRMPs in the Nigerian construction industry. In contrast, the economic situation of the country emerged 19th among the CSF. The study shows that CSF has a high level of impact on HRMPs. From the study, it is important to note that the top two of the nineteen “CSF” could be grouped together as management-related factors. The study findings theoretically provide a solid platform for future researchers seeking to discover the “CSF” for HRMPs in the built environment.

The study recommended management priorities and availability of working capital as an influential factor that have a very high impact in determining bundles of HRMPs to be utilized in the construction industry. The results of the study could be recommended for other developing economies that share similar characteristics with Nigeria. It is also recommended that future studies should be carried out to validate the current qualitative study.

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