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The Impact of Data-Driven Compensation Strategies on Job Satisfaction Among Employees in Nigerian Real Estate Companies

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ABSTRACT

This research paper examines the impact of data-driven compensation strategies on job satisfaction among employees in Nigerian real estate companies. As organizations increasingly adopt big data in human resource management, understanding these approaches' effectiveness in emerging markets is crucial. This research employs a quantitative, cross-sectional design with a sample of 177 employees from Nigerian real estate firms. Data were collected using the Minnesota Satisfaction Questionnaire (MSQ) short form and a custom-developed instrument measuring perceived use of data-driven compensation strategies. Grounded in Herzberg's Two-Factor Theory, the study examines both intrinsic and extrinsic job satisfaction. Pearson's correlation and simple linear regression analyses revealed weak but statistically significant positive relationships between perceived data-driven compensation strategies and intrinsic job satisfaction and a marginally significant relationship with extrinsic job satisfaction. These findings suggest that while data-driven compensation strategies positively influence job satisfaction, their impact is limited. The results partially support Herzberg's theory and contribute to literature on Big Data applications in HRM, particularly in emerging markets and the real estate sector. Implications highlight the need for a holistic approach to employee satisfaction in Nigerian real estate companies. Limitations include convenience sampling and cross-sectional design. Future research should consider longitudinal studies, industry-specific factors, and comparative analyses across different sectors in emerging markets.

INTRODUCTION

In the ever-changing landscape of modern business, organizations are continually seeking creative and innovative strategies to enhance employee performance and satisfaction. Data-driven compensation strategies and its implementation is one area that has gained significant attention in recent years. Biswas et al. (2023) explain that this approach utilizes advanced analytics and big data to inform various HR functions, including salary decisions, bonuses, and other forms of compensation. The real estate sector, particularly in emerging economies like Nigeria, presents a unique context for examining the impact of these strategies on job satisfaction.

Data-driven compensation refers to the use of quantitative and qualitative data to make informed decisions about employee pay and benefits (Stankevičiūtė, 2024). This approach aims to create more equitable, transparent, and motivating compensation structures by considering factors such as individual performance metrics, market trends, and organizational goals (SHRM, 2023). Job satisfaction, on the other hand, is a multifaceted

concept that encompasses an employee's emotional and cognitive evaluation of their work experience (Memon et al., 2023).

The Nigerian real estate sector has experienced significant growth in recent years. Statista (2024) reports a 1.87% increase in Q2 2023 compared to the previous year, with the sector reaching its peak growth of 4.56% in Q3 2022. This growth has been accompanied by increased competition for talent and a growing recognition of the need for more sophisticated human resource management practices. As such, understanding the relationship between compensation strategies and job satisfaction in this context is crucial for both academic research and practical application.

The significance of this research is underscored by recent global trends, particularly those driven by the COVID-19 pandemic. According to Gigauri (2020), the pandemic has accelerated the adoption of digital technologies across industries, including human resources management. This shift has made data-driven decision-making more accessible and relevant than ever before. Additionally, the growing emphasis on employee well-being and work-life balance has prompted organizations to reassess their compensation strategies to better align with employee needs and expectations (Bello et al., 2024)

Several key theories and studies have contributed to our understanding of the relationship between compensation and job satisfaction. Herzberg's Two-Factor Theory (1959) posits that while compensation is a hygiene factor that can prevent dissatisfaction, it may not necessarily lead to increased satisfaction. This theory has been widely applied in various contexts for organization management.

More recent research has focused on the specific impact of data-driven compensation strategies and broader Big Data applications in Human Resources Management (HRM). A study by Sharma and Khan (2022) found that Big Data applications in talent acquisition and workforce optimization led to increased productivity, more accurate hiring predictions, and improved employee retention. The authors further noted that while Big Data can reduce recruitment time and costs, enhance performance analysis, and optimize compensation structures, ethical considerations like data privacy and bias must be addressed. While this study provides valuable insights, it primarily focused on larger organizations, leaving questions about its applicability to smaller firms or emerging markets.

In the Nigerian context, Yakubu et al. (2023) examined the relationship between compensation and job performance in Deposit Money Banks in Kano State. Their findings showed financial compensation significantly impacted employee performance, while non-financial compensation had a positive but insignificant effect. This study provides valuable insights into the Nigerian banking sector, but it does not address data-driven compensation strategies or extend to other industries such as real estate. The research methodology, using Partial Least Square Structural Equation Modelling (PLS-SEM), offers a robust analytical approach. However, the focus on traditional compensation measures rather than data-driven strategies, and its limited scope to one industry and region, highlights the need for further investigation into data-driven compensation approaches across various sectors, including real estate, in Nigeria. Addressing this research gap is crucial as it will provide practical insights for real estate companies in Nigeria and similar emerging markets, potentially informing more effective human resource management practices.

The motivation for this research stems from the recognition of the real estate sector's significant contribution to Nigeria's economic growth and the critical role that satisfied employees play in driving this growth. Recent reports have highlighted challenges in talent retention within the industry, suggesting a need for more effective compensation strategies (Mohamad Mazlan & Jambulingam, 2023). With increased access to data analytics tools and a growing emphasis on evidence-based decision-making (Stobierski, 2019), organizations are better positioned than ever to implement data-driven strategies

to address these challenges. This study seeks to provide timely insights into the effectiveness of these approaches, potentially influencing policy and practice in the real estate sector and beyond.

Purpose of the Present Study

The primary aim of this study is to investigate the impact of data-driven compensation strategies on job satisfaction among employees in Nigerian real estate companies.

Research Objectives

1. To examine the relationship between employees' perception data-driven compensation strategies and intrinsic job satisfaction.
2. To examine the relationship between employees' perception data-driven compensation strategies and intrinsic job satisfaction.
3. To develop recommendations for Nigerian real estate companies.

Research Questions

1. Will there be a significant positive relationship between employees' perception data-driven compensation strategies and intrinsic job satisfaction in Nigerian real estate companies?
2. Will there be a significant positive relationship between employees' perception data-driven compensation strategies and extrinsic job satisfaction in Nigerian real estate companies?

Research Hypotheses

1. There will be a significant positive relationship between employees' perception of data-driven compensation strategies and intrinsic job satisfaction in Nigerian real estate companies.
2. There will be a significant positive relationship between employees' perception data-driven compensation strategies and extrinsic job satisfaction in Nigerian real estate companies

METHOD

Philosophical Foundation

This study adopts a positivist paradigm, which aligns with the quantitative nature of the research. The positivist approach assumes that reality is objectively measurable and that knowledge can be gained through empirical observation and measurement (Park et al., 2020). This paradigm is suitable for examining the relationship between data-driven compensation strategies and job satisfaction, as it allows for the testing of hypotheses and the quantification of these relationships.

Sample

The target population for this study comprised employees of Nigerian real estate companies. The sample size was initially calculated using Cochran's formula for sample size determination:

$n = Z^2 * p * (1-p) / e^2$

Where: n = sample size, Z = 1.96 (for 95% confidence level), p = 0.5 (assumed proportion), e = 0.05 (margin of error)

This calculation yielded a sample size of 384. However, given the specific population of real estate employees in Nigeria, and the time-frame for the research, the finite population correction was applied, resulting in a final target sample size of 250. The study employed a convenience sampling method, distributing online surveys to employees across various Nigerian real estate companies. Out of the targeted 250 participants, 177 complete responses were received and analyzed, representing a response rate of 70.8%.

Instrument

The short form of the Minnesota Satisfaction Questionnaire (MSQ), consisting of 20 items, was used to measure job satisfaction. This widely-used instrument has demonstrated high reliability and validity across various occupational groups (Weiss, 1967).

A custom-developed instrument was used to measure the extent and perceived effectiveness of data-driven compensation strategies. This survey included items assessing the use of data in setting salaries, bonuses, and benefits; perceived fairness; transparency; and alignment with market standards. The instrument was pilot-tested for face validity and reliability before full deployment.

Design

This study employed a quantitative, cross-sectional design. This approach allows for the examination of relationships between variables at a single point in time, which is appropriate for addressing the research questions and testing the hypotheses.

Procedure

The research was conducted over a one-month period. Participant recruitment was primarily carried out through LinkedIn, a professional networking platform. LinkedIn's search function was used to identify real estate companies operating in Nigeria. Once these companies were identified, their employees were located through the platform's company page feature and employee listings. Potential participants were then contacted directly via LinkedIn's messaging system or through email addresses provided on their profiles. The initial contact included information about the study's purpose, the voluntary nature of participation, and a link to the online survey hosted on Google Forms. To ensure a wide reach, the researcher also posted about the study on relevant LinkedIn groups focused on Nigerian real estate and property management. These posts included a brief description of the study and an invitation to participate, along with the survey link.

Data Analysis

Data analysis was conducted using SPSS version 25. Descriptive statistics were computed for all variables. The relationships between data-driven compensation strategies and both intrinsic and extrinsic job satisfaction were examined using Pearson's correlation coefficient. Multiple regression analysis was employed to assess the predictive power of data-driven compensation strategies on job satisfaction while controlling for demographic variables.

Ethics

Informed consent was secured from all participants before they completed the survey. Participants were assured of confidentiality and anonymity, and all data was stored securely on a password protected One-drive. Participants were informed of their right to withdraw from the study at any time without penalty.

RESULTS

Descriptive statistics

Table 1 (in the Appendix) shows that employee's perception of Data-Driven Compensation strategies had a mean score of 21.35 (SD = 7.19), suggesting a moderate level of perceived use of such strategies. Intrinsic Job Satisfaction displayed the highest mean score at 34.44 (SD = 11.58), indicating relatively high levels of internal job satisfaction. Extrinsic Job Satisfaction showed a moderate level with a mean of 27.89 (SD = 10.43). Notably, the standard deviations for all three variables, particularly for the job satisfaction measures, suggest considerable variability in responses across the sample.

Hypothesis Testing

To test the first hypothesis, a Pearson's product moment correlation coefficient was run, followed by a simple linear regression statistic. The result is presented in table 2 and 3 (See Appendix).

Table 2 shows a weak but statistically significant positive correlation between perceived data-driven compensation and intrinsic job satisfaction among employees in Nigerian real estate companies r (177) = .15, p = .04. To further establish and explain this relationship, a simple linear regression was run. The simple linear regression analysis (Table 3) shows that perceived data-driven compensation strategies significantly predict intrinsic job satisfaction, F (1, 175) = 4.18, p = .04. However, the model explains only 2.3% of the variance in job satisfaction (R^2 = .023). This indicates a statistically significant but limited relationship between data-driven compensation and intrinsic job satisfaction due to the small effect size.

Similar to the first hypothesis, a Pearson's product moment correlation coefficient, followed by a simple linear regression statistic was run. The result is presented in table 4 and 5 (See Appendix).

Table 4 presents a weak statistically insignificant positive correlation between perceived data-driven compensation and intrinsic job satisfaction among employees in Nigerian real estate companies r (177) = .15, p = .05. To further establish and explain this relationship, a simple linear regression was run. The simple linear regression analysis (Table 5) shows that perceived data-driven compensation strategies marginally predict extrinsic job satisfaction, F (1, 175) = 3.76, p = .05, explaining 2.1% of the variance (R^2 = .021). The borderline significant relationship suggests a weak effect with limited practical implications.

DISCUSSION

The findings of this research reveal a complex relationship between data-driven compensation strategies and job satisfaction in Nigerian real estate companies. A weak but statistically significant positive correlation was found between these strategies and intrinsic job satisfaction, with data-driven compensation strategies explaining 2.3% of the variance. Similarly, a marginally significant relationship was observed with extrinsic job satisfaction, accounting for 2.1% of the variance. These results partially align with existing literature, such as Sharma and Khan's (2022) study highlighting the potential of Big Data in optimizing compensation structures. However, the small effect sizes contrast with their more substantial reported impacts, possibly due to the specific context of the Nigerian real estate sector. The findings also somewhat parallel Yakubu et al.'s (2023) research in the Nigerian banking sector, though the weaker relationships in the present study suggest industry-specific dynamics.

Theoretically, these results provide partial support for Herzberg's Two-Factor Theory, with compensation showing some positive impact on satisfaction, albeit with small effect sizes. This suggests compensation may indeed play a more significant role in preventing dissatisfaction rather than actively promoting satisfaction. The study also contributes to the growing literature on Big Data applications in HRM, though the small effect sizes indicate that industry-specific factors or organizational data analytics maturity may moderate its transformative potential.

Practically, these findings suggest that while data-driven compensation positively impacts job satisfaction, Nigerian real estate companies should adopt a holistic strategy addressing both intrinsic and extrinsic factors. In addition, industry-specific compensation and improved data analytics are essential. Finally, data-driven compensation should be part of a broader strategy recognizing the complex factors influencing employee satisfaction and retention.

CONCLUSION

This paper explored the impact of data-driven compensation strategies on job satisfaction among employees in Nigerian real estate companies. The findings revealed weak but statistically significant positive relationships between these strategies and both intrinsic and extrinsic job satisfaction. While data-driven compensation strategies showed a positive influence, their small effect sizes suggest that other factors may play more substantial roles in determining job satisfaction in this context. These results contribute to the growing body of knowledge on Big Data applications in Human Resource Management, particularly in the context of emerging markets and specific industries like real estate. The study also provides empirical support for the nuanced application of Herzberg's Two-Factor Theory in the Nigerian real estate sector.

However, limitations such as the use of convenience sampling and the cross-sectional design may impact the generalizability of the findings. Future research could benefit from longitudinal studies to examine the long-term effects of data-driven compensation strategies. Additionally, investigating the interaction between these strategies and other factors influencing job satisfaction, such as organizational culture or leadership styles, could provide a more comprehensive understanding. Exploring the varying impacts of different types of data-driven strategies and considering the role of data analytics maturity in organizations could also yield valuable insights. Finally, comparative studies across different sectors in Nigeria or similar emerging markets could help identify industry-specific best practices in implementing data-driven compensation strategies.

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