




“The impact of innovative work behavior, perceived Leadership 4.0, and corporate social responsibility on sustaining banking industry performance in Nigeria within the 4IR Era”

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THE IMPACT OF INNOVATIVE WORK BEHAVIOR, PERCEIVED LEADERSHIP 4.0, AND CORPORATE SOCIAL RESPONSIBILITY ON SUSTAINING BANKING INDUSTRY PERFORMANCE IN NIGERIA WITHIN THE 4IR ERA

Abstract

Despite the increase in business performance research, only some studies have examined the combination of innovative work behavior, Leadership 4.0, and corporate social responsibility as performance factors in Nigeria's banking industry in the current 4IR. This study aims to sustain performance in the banking industry of Nigeria. Four hundred (400) bank employees were randomly selected for this study from a sample of cooperating banks (Zenith Bank Plc, Guarantee Trust Bank Plc, United Bank for Africa Plc, and First Bank of Nigeria Plc) in the Nigerian states of Oyo and Lagos. One Hundred (100) participants were chosen from each bank. Additionally, the survey was given out to randomly chosen bank employees using structured questionnaires. Participants were selected using a simple random sampling technique; 386 of the 400 surveys were appropriate for analysis. To do the analysis, SPSS version 29 was used. According to the study's findings, innovative work behavior had a 77% influence on performance variance within the banking industry in the current 4IR, Leadership 4.0 had an 88% influence, and corporate social responsibility had a 71% influence. Accordingly, the results show that more significant innovation in work behavior, adoption of Leadership 4.0, and involvement in CSR significantly predict the maintenance of performance in the Nigerian banking industry. Additionally, the findings indicate that adopting Leadership 4.0 predicts a more significant variance in performance in the banking business, followed by demonstrating innovative work behavior and involvement in corporate social responsibility.

Keywords sustainability, performance, novelty, leadership, obligation, banks, Nigeria

JEL Classification G21, M14, O31

INTRODUCTION

Using Nigeria as an example, the total quantity of bank deposits increased from N33.45 trillion in 2019 to N42.01 trillion in 2020, showing a more significant mobilization of savings (Central Bank of Nigeria, 2021).

The fourth industrial revolution, which integrates cutting-edge technology like robots, artificial intelligence, and the Internet of Things (IOTs), has significantly altered banks' landscape (Park, 2018). With the emergence of e-commerce, innovation, entrepreneurship, and the 4IR, the banking sector is critical in facilitating global trade by providing services, including letters of credit, trade financing, and foreign exchange.

Innovative work behavior (IWB) entails employees developing and implementing original and creative ideas to solve problems, take ad-



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vantage of opportunities, and boost the company's competitiveness (De Jong & Den Hartog, 2010). In recent years, academic scholars and stakeholders have shown a growing interest in CSR (Shen et al., 2016). How well does CRS now guarantee sustainable company performance in Nigeria's banking sector during the 4IR era? Furthermore, Tredgold (2017) emphasized the importance of leadership in ensuring the success and survival of organizations. Its significance within the 4IR must be balanced because it calls for new leadership ideologies, management tactics, and the advancement of ongoing reforms (Shamim et al., 2016). Today's business leaders want strategies to fulfill their objectives in the actual Digital World (Venkatesh, 2020). As a result, from the perspective of the 4IR, the notion of "L4.0," a new leadership approach, has better capacities for excitement, enabling change, and obligation, all of which favor organizational performance. However, few studies have examined the interaction of innovative work behavior, L4.0, and corporate social responsibility as determinants of performance within Nigeria's banking industry during the current 4IR, despite a surge in business performance research.

1. LITERATURE REVIEW AND HYPOTHESES

Innovative Work Behavior (IWB) is a crucial idea in organizational behavior that describes employees' propensity to take part in original and creative tasks that enhance workflow, generate fresh ideas, and promote corporate innovation. Businesses must remain competitive and adjust to quickly changing circumstances (Anderson et al., 2014).

Organizational Learning Theory contends that organizations can continually improve their performance by acquiring, interpreting, and disseminating knowledge, as Argyris and Schon (1978) stated. Employees who exhibit innovative work practices experiment with novel concepts and methods, providing the company with educational possibilities. Therefore, encouraging continuous learning in the banking sector can improve operational efficiency, a competitive edge, and performance.

The fourth industrial revolution, defined by digitalization, automation, artificial intelligence, and developing technologies, is known as "Leadership 4.0" in the banking sector. This refers to adapting leadership approaches to meet the difficulties and opportunities it presents. Banking leaders must be inventive, flexible, and tech-savvy to generate organizational growth and satisfy customer demands in a continually changing market (Maponya & Naidoo, 2023). Finding the ideal ratio between human skills and technical capabilities is at the heart of Leadership 4.0. Leaders should encourage a culture where people and technology work well together, utilizing each other's advantages to get the best results possible (PwC, 2016).

According to Birkinshaw and Cohen (2013), agile leadership theory emphasizes adaptation, flexibility, and response to change. According to Leadership 4.0, agile leaders embrace digital transformation and encourage agility across the board to handle the dynamic and uncertain corporate landscape. They support technology-enabled cross-functional collaboration, experimentation, and quick decision-making. Improved organizational agility, creativity, and competitiveness result in better business performance.

Corporate social responsibility within the banking industry is the practice of banks and other financial organizations, considering their effects on society and the environment while conducting business operations. It entails abiding by the law and moral principles and going above and beyond the call of duty to actively promote community and environmental well-being. This can be done through several measures, including charitable giving, attempts to protect the environment, moral lending practices, and assistance with social issues (Liu et al., 2019).

According to the legitimacy theory, companies work to keep their reputations among stakeholders and the general public in good standing. Organizations are required to adhere to societal standards, values, and expectations, according to Suchman (1995). By participating in CSR initiatives, businesses demonstrate their dedication to upholding these standards and acquiring legitimacy and social approval. Therefore, maintaining legitimacy can improve a corporation's reputation, lower regulatory risks, and benefit investor and customer decisions, affecting business performance.

The theories mentioned above will be used in this study as they explore the Organizational Learning Theory, which holds that organizations can enhance their performance over time by gathering, analyzing, and sharing knowledge. Innovative work practices are displayed by employees who experiment with new ideas and procedures, opening up educational opportunities for the business. Therefore, promoting continuous learning can enhance performance, a competitive edge, and operational effectiveness in the banking industry. The idea put forth by Birkinshaw and Cohen (2013) that agile leadership theory emphasizes adaptation, flexibility, and reactivity to change will also be looked at in this study. Superior organizational competitiveness, agility, and agility lead to outstanding company performance. This essay will also examine Suchman's (1995) claim that businesses should endeavor to maintain a positive reputation among stakeholders and the broader public. As a result, upholding legitimacy can enhance a company's reputation, reduce regulatory concerns, and facilitate investor and customer decisions, which can impact business performance.

Competencies and behaviors in the 4IR may generate organizational performance, including collaboration, innovation, skill, and learning (Shamim et al., 2016). According to Inam (2019), organizations will own the future in the 4IR's ambiguity, and if they support and adopt innovative behavior, their performance will be unquestionable. Furthermore, Bogilović et al. (2017) found that IWB positively affects organizational performance. Further, a substantial beneficial association between innovation and organizational success was hypothesized by Oberer and Erkollar (2018). As Schwab (2018) said, achieving organizational performance in the 4IR would necessitate more innovative and proactive behavior.

Leadership 4.0 is adopting and applying cutting-edge technologies in the context of leadership within enterprises, such as automation, big data analytics, and artificial intelligence (Mithra et al., 2023). Banking leaders who use Leadership 4.0's advanced data analytics tools can make more intelligent, data-driven decisions. This boosts overall performance by increasing operational effectiveness, risk management, and

customer-centric strategies (Mithra et al., 2023). Additionally, Leadership 4.0 promotes flexibility and adaptation to negotiate the banking industry's rapid change. Leaders may adapt quickly to market dynamics and consumer needs when they embrace new technology and promote a culture of innovation and constant learning. As a result, banks can foster innovation, maintain their competitiveness, and produce improved performance results (Puhovichova & Jankelova, 2021). A digitally skilled staff must also be developed and nurtured, according to Leadership 4.0. Therefore, good leadership enhances employee performance, engagement, and retention in the banking sector (Gyurák Babelová et al., 2022). Leadership 4.0 also allows banking leaders to use client data and customized digital experiences to provide top-notch customer service. This enhances client retention, loyalty, and happiness, which benefits the bank's performance (Mithra et al., 2023).

Initiatives focused on corporate social responsibility (CSR) have the potential to substantially affect how well banks function since, according to Hasan and Habib (2017), banks that actively participate in CSR activities perform better financially. Additionally, CSR policies help banks manage risk more effectively. Banks reduce the risks of environmental catastrophes, harm to their reputation, and regulatory compliance by implementing sustainable business practices and incorporating environmental and social issues into their operations. Performance is consequently improved (Vásquez-Ordóñez et al., 2023). CSR initiatives also help banks manage risk and maintain financial stability. Banks can detect and reduce potential risks, including reputational, legal, regulatory, and operational risks, by integrating environmental, social, and governance (ESG) elements into their operations. Better financial performance may result (García-Sánchez et al., 2019). Kim et al. (2018) discovered that CSR had a favorable effect on the performance of Korean banks. This investigation's purpose was inspired by researching innovative work behavior, leadership 4.0, and corporate social responsibility.

The purpose of this study is to sustain performance within the Nigerian banking industry.

In the 4IR period, this article seeks to create a practical model for efficiently promoting and maintaining positive performance in Nigeria's banking industry.

The following hypotheses are put forth to explore further how innovative work behavior, Leadership 4.0, and corporate social responsibility could aid Nigeria's banking industry in maintaining performance during the present 4IR:

H_1 : *During the current 4IR, Nigeria's banking industry experiences a substantial performance impact from IWB.*

H_2 : *L4.0 substantially impacts performance in the Nigerian banking industry during the current 4IR.*

H_3 : *In the present 4IR, corporate social responsibility substantially predicts performance in Nigeria's banks.*

H_4 : *During the current 4IR, performance in Nigeria's banks is significantly and jointly impacted by IWB, L4.0, and CSR.*

2. METHODS

This article used a survey design with structured questionnaires to examine the impact of IWB, L4.0, and CSR on the performance of the Nigerian banking sector in the current 4IR. For this investigation, four hundred participants were randomly chosen from a sample of participating banks in the Nigerian states of Oyo and Lagos. The banks are Zenith Bank Plc, Guarantee Trust Bank Plc, United Bank for Africa Plc, and First Bank of Nigeria Plc. The method used to choose study participants was random sampling. Participants were selected using a simple random sampling method. This study's researcher promoted voluntary involvement and ensured that moral principles were respected. There were 386 surveys in total, and they were located and finished appropriately. The data were cleaned and examined using SPSS version 29 (Statistical Packages for Social Sciences). However, this research conducted factor and reliability tests to develop an appropriate instrument and acknowledge the local dependability of the measure.

This study used different sections of the questionnaire:

1. *Section A: Respondents' Demographics:* Age, gender, employment experience, and educational level information for the respondents are included in this section.
2. *Section B: Innovative Work Behavior Scale (IWBS):* This questionnaire asks respondents about their perceptions of innovative work practices. The construct, which had 14 items and a Cronbach's alpha coefficient of .94, was taken from Kleysen and Street (2001). Meanwhile, this inquiry achieved a Cronbach's alpha coefficient of $\alpha = .92$. For this measurement, responses range from "1 = Never" to "6 = Always" on a 6-point Likert scale.
3. *Section C: Leadership 4.0 Scale (L4.0S):* The research's Leadership 4.0 instrument from Pienaar (2020) was promoted in this study. It is divided into three sections: enthusiasm, engagement, and empowerment. The five (5) items in the empowerment measure are reliable $\alpha = .72$. However, this work found an $\alpha = .86$ coefficient. Four (4) items in the subsection on enthusiasm have a reliability of $\alpha = .82$. This paper, in comparison, achieved a dependability of $\alpha = .90$. Six (6) components comprise the engagement segment. Its dependability is $\alpha = .76$. The reliability of this study was $\alpha = .81$. The Leadership 4.0 scale has fifteen (15) components in total. The response was presented on a 5-point Likert scale.
4. *Section D: Corporate Social Responsibility Scale (CSRS):* The scale used in the study by Luo et al. (2017) is discussed. There are 23 items on this questionnaire, each with a 5-point Likert scale. Employee, Customer, Shareholder, Environment, Community, and Government are the six categories that make up this document. The employee measure's six (6) items have a reliability score of $\alpha = .85$. However, this study discovered a coefficient of $\alpha = .87$. The reliability of four (4) elements in the client subsection is $\alpha = .79$. Comparatively, this work attained a reliability of $\alpha = .84$. The shareholder section consists of three (3) items. It has a reliability of $\alpha = .78$. This study's dependability

score was $\alpha = .83$. The environment measure's three (3) items have a reliability coefficient of $\alpha = .82$. Nonetheless, this research discovered a coefficient of $\alpha = .83$. The dependability of three (3) items in the community subsection is $\alpha = .79$. However, this investigation found a coefficient of $\alpha = .81$. The government part consists of four (4) elements. It has a reliability of $\alpha = .86$. This study had a reliability of $\alpha = .89$. The scale's initial total consistency coefficient was $\alpha = .94$, but the current research has produced a reliability coefficient for Cronbach's alpha of $\alpha = .95$.

5. *Section E: Organizational Performance Scale (OPS)*: Questions were added in this study section to assess business performance deemed crucial for the fourth industrial revolution. This metric was used in Pienaar's (2020) study. Four sub-sections were created from a total of twenty-six (26) questions: digital risk management (9 items), business model and value creation/service orientation (7 pieces), human capital capabilities (8 items), and individual assessment of organizational sustainability/competitiveness (2 things). Eight items comprise the human capital capacities sub-scale, with a Cronbach's alpha of $\alpha = .85$. In the current study, a Cronbach's alpha coefficient of $\alpha = .90$ was attained. The eight-item digital risk management sub-scale, according to the original inventor, had a Cronbach's alpha coefficient of $\alpha = .90$. For the current inquiry, Cronbach's alpha is attained at a value of $\alpha = .89$. There were nine (9) components total in the company model and the value creation/service orientation component. The initial Cronbach's alpha coefficient for this dimension was $\alpha = .89$. In contrast, the

current study obtains a Cronbach's alpha value of $\alpha = .93$. With a Cronbach's alpha coefficient of $\alpha = .89$, the personal view of organizational survival, sustainability, and competitiveness only has one item. Additionally, this article achieves a Cronbach's alpha coefficient of $\alpha = .92$. Every question had a 5-point Likert scale for responses, with 1 signifying "strongly disagree" and 5 denoting "strongly agree."

However, a pilot study was used to foresee potential issues and confirm the accuracy of the measurement scales.

3. RESULTS

The tables below show the results of the analyzed data.

Using hierarchical multiple regression, an independent variable (Innovative Work Behavior) was investigated for its ability to predict performance in the current 4IR of Nigerian banks. Furthermore, this study examined the potential of L4.0 and IWB to predict performance in Nigeria's banking industry in the current 4IR. After adjusting for the effect of corporate social responsibility, it was also used to evaluate the capacity of two separate elements (innovative work behavior and Leadership 4.0) to influence levels of organizational performance. The three independent qualities (innovative work behavior, Leadership 4.0, and corporate social responsibility) were also assessed to gauge the level of organizational performance.

The results from Table 1 clearly show that innovative work behavior affects organizational perfor-

Table 1. The model summary of hierarchical multiple regressions presenting the distinct joint impact of innovative work behavior, Leadership 4.0, and corporate social responsibility on the performance of Nigeria's banking industry in the current 4IR

Model Summary ^d									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	F Change Sig
1	.955 ^a	.924	.923	2.92270	.763	1357.685	1	384	.002
2	.962 ^b	.956	.955	2.98911	.051	114.849	1	383	.000
3	.943 ^c	.891	.890	2.29347	.022	6.957	1	382	.001

Note: a. Predictors: (Constant), Innovative Work Behavior; b. Predictors: (Constant), Innovative Work Behavior, Leadership 4.0; c. Predictors: (Constant), Innovative Work Behavior, Leadership 4.0, Corporate Social Responsibility; d. Dependent Variable: Organizational Performance.

Table 2. Summary of hierarchical multiple regressions showing the distinct independent and combined effect of innovative work behavior, Leadership 4.0, and corporate social responsibility on the performance of Nigeria's banking industry in the current 4IR

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	100.852	.865		100.281	.000	87.019	91.894
	Innovative Work Behavior	1.079	.052	.809	48.579	.000	1.050	1.899
2	(Constant)	105.553	1.085		105.859	.000	103.572	107.533
	Innovative Work Behavior	1.515	.040	.784	25.636	.000	1.606	1.425
	Leadership 4.0	1.074	.024	.796	22.443	.000	.205	.133
3	(Constant)	101.252	1.681		45.167	.000	98.705	105.800
	Innovative Work Behavior	.812	.058	.770	25.991	.002	.791	.619
	Leadership 4.0	1.216	.069	.881	31.748	.000	1.238	1.156
	Corporate Social Responsibility	.732	.047	.714	20.711	.001	.227	.145

Note: Dependent Variable: Organizational Performance.

mance significantly, explaining 92% of the variance ($F(1, 385) = 1357.685, p < .001$). The model explained 95% of the overall change by including Leadership 4.0 in step 2 and innovative work behavior ($F(2, 384) = 1785.394, p < .001$). Thus, a key element in comprehending organizational performance is leadership 4.0. As indicated in Table 1, the two independent variables contributed 3% of the change in organizational performance even after adjusting for corporate social responsibility (R^2 squared change = .051, F change $(1, 383) = 114.849, p < .001$). The model, which considered innovative work behaviors, Leadership 4.0, and corporate social responsibility, explained 89% of the variation ($F(3, 383) = 1287.174, p < .001$).

These findings in Table 2 highlight the critical role of L4.0 and IWB in obtaining the highest organizational success. The data presented in Table 2 demonstrates the impact of the variables on organizational performance, with the three independent metrics explaining an additional 0.2% difference. Further analysis revealed that all three independent variables significantly affected organizational performance, with Leadership 4.0 having a higher beta value ($\beta = .881, p < .001$) than innovative work behavior ($\beta = .770, p < .001$) and corporate social responsibility ($\beta = .714, p < .001$). These findings are supported by statistical measures (R^2 squared change = .022, F change $(1, 382) = 6.957, p < .001$). According to the data in Table 2, Nigerian banks have excelled in the most recent 4IR by using Leadership 4.0 and cutting-edge work procedures. This assertion is further supported by the

data from Model 2, which demonstrates a strong association between these elements and enhanced organizational performance ($R = .962, R^2 = .956, F = 1785.394, p < .001$). The results are statistically significant, as shown by the relevant p-value. The study also discovered that the combined effects of L4.0, CSR, and IWB on organizational performance accounted for 94.3% of the improvements. Thus, these elements are essential in determining how well the Nigerian banking industry performs in the present 4IR.

As was mentioned in the previous paragraph, the impacts of each of the three independent variables on organizational performance were significantly different from one another, with Leadership 4.0 having a higher beta value ($\beta = .881, p < .001$) than innovative work behavior ($\beta = .770, p < .001$) and corporate social responsibility ($\beta = .714, p < .001$). Thus, Leadership 4.0 significantly and favorably affects the current organizational performance of Nigeria's banks in the present 4IR. The P-value is appropriate. This demonstrates that Leadership 4.0 significantly impacts bank performance in the current 4IR in Nigeria. The findings also show innovative work practices significantly impact Nigerian banks' performance in the most recent 4IR. The p-value is appropriate. As a result, the proposed theory is validated: IWB considerably affects the performance of Nigeria's banking industry during the current fourth industrial revolution era. The result also shows that corporate social responsibility significantly and favorably influenced the

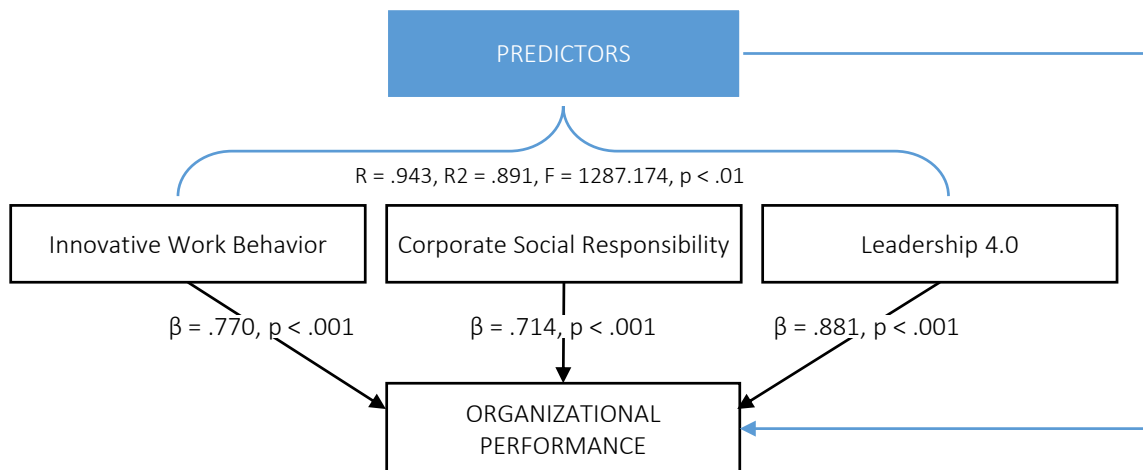


Figure 1. Independent and joint impacts of IWB, L4.0, and CSR on bank performance

performance of Nigerian banks in the current 4IR. P is set at the proper value. According to the 4IR period, it is widely acknowledged that corporate social responsibility greatly impacts how well Nigeria’s banks function. Because of this, the model is presented in Figure 1.

In addition, from its results, this article infers a critical paradigm that banks can use to enhance and maintain performance for the 4IR (see Figure 2). Hence, the layout in Figure 2.

The results of the hypotheses testing show that:

H₁: IWB significantly and positively impacts Nigeria’s banking industry performance during the current 4IR.

H₂: In the current 4IR, L4.0 significantly influences performance within the Nigerian banking industry.

H₃: Corporate social responsibility substantially predicts performance in Nigeria’s banks within 4IR.

H₄: IWB, L4.0, and CSR significantly and jointly impact performance in Nigeria’s banks during the current 4IR.

4. DISCUSSION

This study showed that the performance of Nigerian banks in the current 4IR is significantly

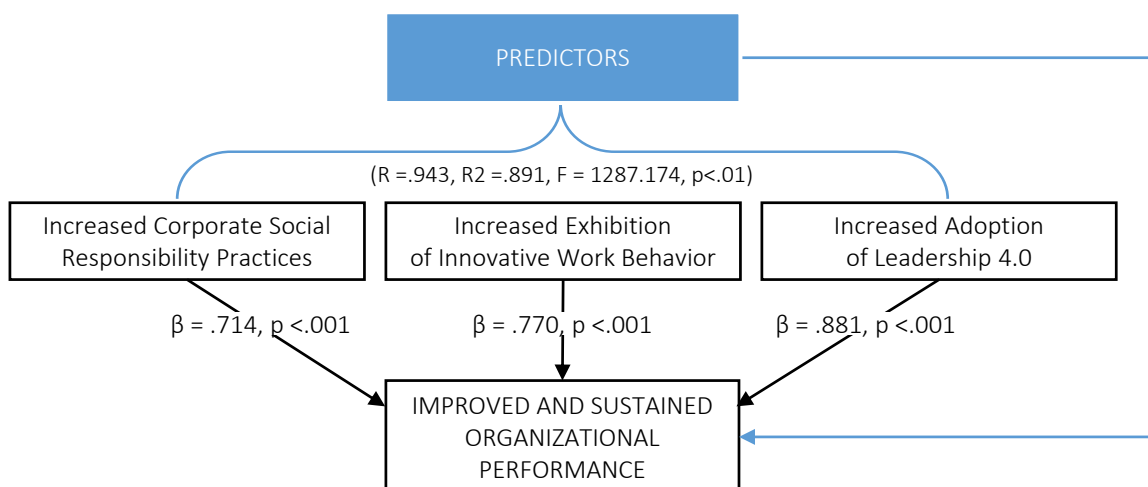


Figure 2. Realistic model for improving and maintaining bank performance

and favorably influenced by their innovative work approach. This statement is predicated on the idea that when Nigerian banks exhibit more innovative work behavior, they will perform better. These results are consistent with the idea that during the 4IR, more Nigerian banks performed better as they increased the exhibition of innovative work behavior, according to earlier empirical research (Inam, 2019). Organizations will own the future in the ambiguity of the 4IR if they support and adopt innovative behavior, and their performance will be unquestionable. Additionally, it supports the results of Bogilovi et al. (2019) on innovative work behavior and the performance of organizations. They discovered that IWB enhances the performance of organizations. These results corroborate Schwab, K. (2018), who argued that improving organizational performance in the 4IR required a more creative and aggressive strategy. It also supports the organizational learning theory, which holds organizations may continuously enhance their performance by gathering, analyzing, and distributing knowledge. As a result, supporting continuous learning can boost performance, competitive advantage, and operational effectiveness in the banking industry (Argyris & Schon, 1978).

This study also revealed that Leadership 4.0 significantly and favorably affected Nigerian banks' 4IR performance. The study indicates that the more Nigerian banks adopt a Leadership 4.0 approach, the better they perform during the 4IR era. These findings are consistent with the claim made by some studies (e.g., Mithra et al., 2023) that Leadership 4.0 improves performance overall by enhancing operational efficiency, risk management, and customer-centric tactics. This result also corroborates the claim made by some researchers (Puhovichova & Jankelova, 2021) that Leadership 4.0 encourages flexibility and adaptation to deal with the banking industry's rapid change and that leaders can quickly respond to market dynamics and consumer needs when they embrace new technology and foster a culture of innovation and constant learning. Hence, banks can encourage innovation, preserve competitiveness, and provide better performance results. Also, this study supports the assertions made by Mithra et al. (2023) that Leadership 4.0 enables banking executives to use client data and tailored digital experiences to deliver excellent customer service. As

a result, customer satisfaction, loyalty, and retention increase, improving the bank's performance. Furthermore, it supports the agile leadership theory, which contends that to navigate the dynamic and unpredictably changing corporate landscape, agile leaders must embrace digital transformation and promote agility across the board. They encourage experimentation, quick decisions, and cross-functional collaboration made possible by technology. Therefore, organizational competitiveness and agility improve company performance (Birkinshaw & Cohen, 2013).

Furthermore, the study's findings demonstrated that corporate social responsibility significantly and positively impacted performance at Nigerian banks throughout the fourth industrial revolution. The inference made from this result is that if Nigerian banks become more involved in corporate social responsibility, their performance will improve. According to Hasan and Habib (2017), banks that actively engage in CSR activities perform better financially. The current finding supports their opinion. Also, the present result backs up the claim made by Luis René Vásquez-Ordóñez et al. (2023) that banks can lower their risks of regulatory compliance, reputational damage, and environmental catastrophes by implementing sustainable business practices and integrating environmental and social issues into their operations. This research also supports Kim et al.'s (2018) observation that CSR programs aid banks in managing risk and preserving their financial stability. They have an encouraging effect on Korean banks' performance. These findings support the legitimacy theory, which holds that businesses try to maintain a positive reputation among stakeholders and the wider public. Organizations must uphold societal norms, beliefs, and expectations. Thus, keeping legitimacy can boost a company's reputation, reduce regulatory concerns, and aid investor and customer decisions, affecting corporate success (Suchman, 1995).

The findings of this study demonstrated that each of the three independent metrics during the present 4IR had a significant, varied, and independent impact on performance when efforts were made to know the differential independent and joint effects of innovative work behavior, Leadership 4.0, and corporate social responsibility in Nigeria's banks.

This shows that adopting Leadership 4.0 significantly influences Nigerian banks' performance in the current 4IR, in addition to their innovative work behaviors and corporate social responsibility. The recent findings' third-step model demonstrates that the three factors significantly impacted respondents' perceptions of performance more than other possible combination matrices. As a result, 94.3% of Nigeria's banks fared better in the most recent 4IR because of their creative work practices, adoption of Leadership 4.0, and commitment to corporate social responsibility. Factors

not considered in the current analysis cause the 5.7% disparity in performance in Nigeria's banks in the current 4IR. These results provide credence to the idea that, in the current 4IR, the performance of Nigeria's banking industry is considerably and jointly impacted by innovative work behavior, Leadership 4.0, and corporate social responsibility.

In the contemporary 4IR, IWB, L4.0, and CR substantially impact the performance of the Nigerian banking industry.

CONCLUSION

This study aims to sustain performance within the Nigerian banking industry. The findings of this study showed that innovative work behavior, Leadership 4.0, and corporate social responsibility independently and significantly predicted the variance in the performance in the banking industry in the current 4IR. As a result, the report concludes that innovative work behaviors, Leadership 4.0, and CSR significantly impact the performance of the banking industry.

However, the following suggestions are pertinent to achieving improved and sustainable performance within the banking industry:

The management of banks must build an organizational culture that fosters and rewards innovation, learning from setbacks without fear of punishment, to improve and sustain performance in the banking industry within the present 4IR. They must trust their employees' judgment, offer them the freedom and tools to experiment with new concepts, and allow them to take measured risks. Additionally, they must spend money on employee training and development initiatives (such as conferences, workshops, and seminars on banking, technology, and innovation). Moreover, leaders in the banking sector should refrain from overburdening staff members with work because a healthy work-life balance can boost innovation and creativity.

Moreover, it is recommended in this paper that banking industry management attempt to implement agile project management approaches to support quicker decision-making, adaptable processes, and shorter product development cycles. This will make it easier for a bank to adjust to the continuously shifting market demands. To provide individualized and seamless experiences, they should also put customers at the center of all operations and decision-making processes, utilizing data analytics to acquire insights into customer preferences and behavior. The management of the banking sector should also promote diversity in the workforce and foster an inclusive workplace where all employees feel appreciated and respected. This will result in a more diverse pool of viewpoints and ideas, improving problem-solving and decision-making. Also, they ought to encourage ethical banking and environmental practices.

The management of the banking sector is advised to set specific, measurable, achievable, relevant, and time-bound (SMART) CSR goals consistent with a bank's values and business plan. Customers, staff, investors, and the neighborhood should all be included in the CSR decision-making process. They should also ensure the bank follows ethical lending guidelines, stays away from ventures that harm the environment, and maintains financial reporting transparency. In addition, banking industry management should collaborate with nonprofit groups or governmental organizations to meet neighborhood needs by funding initiatives that raise living standards in neighborhoods where the bank operates by invest-

ing in infrastructure, healthcare, education, and other projects. They can also frequently evaluate the results of CSR projects and publicly communicate the findings to stakeholders, highlighting the bank's dedication to accountability and pointing out areas for development.

However, the study's findings revealed important new information regarding the independent and joint effects of innovative work behaviors, Leadership 4.0, and corporate social responsibility on the performance of Nigerian banks.

AUTHOR CONTRIBUTIONS

Conceptualization: Foluso Adekanmbi.

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Formal analysis: Foluso Adekanmbi.

Funding acquisition: Wilfred Ukpere.

Investigation: Foluso Adekanmbi.

Methodology: Foluso Adekanmbi.

Project administration: Foluso Adekanmbi, Wilfred Ukpere.

Supervision: Wilfred Ukpere.

Validation: Foluso Adekanmbi, Wilfred Ukpere.

Visualization: Foluso Adekanmbi.

Writing – original draft: Foluso Adekanmbi.

Writing – reviewing & editing: Foluso Adekanmbi, Wilfred Ukpere.

CONFLICT OF INTEREST

Regarding this publication and the research findings that have been published, the authors state they are not financially interested in the study's outcome, the acquisition and use of its results, or any non-financial personal ties.

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