

**VIRTUAL LEADERSHIP AND EMPLOYEE VOICE BEHAVIOUR IN DEPOSIT MONEY
BANKS IN RIVERS STATE**

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Abstract

This study examined the relationship between virtual leadership and employee voice behaviour in deposit money banks in Rivers State, Nigeria. Deposit money banks increasingly rely on digital communication systems, virtual work platforms, and technology-driven management practices to improve coordination, service delivery, and operational efficiency. However, greater dependence on virtual interactions has raised concerns about leadership effectiveness, employee participation, communication, and organisational trust. Virtual leadership was measured using digital communication effectiveness and virtual trust building, while employee voice behaviour was measured using promotive voice behaviour and upward voice behaviour. The study was anchored on the Leader-Member Exchange (LMX) Theory. A correlational research design was adopted, and data were collected from employees of selected deposit money banks in Rivers State, Nigeria. The population comprised 650 employees selected from 10 deposit money banks operating in Rivers State, Nigeria, with a sample size of 248 determined using the Taro Yamane formula. A total of 248 questionnaires (100%) were distributed, 235 (94.76%) were successfully retrieved, while 13 (5.24%) were not returned. No questionnaire was invalid, resulting in 235 valid questionnaires (94.76%) used for the analysis. Data were analyzed using descriptive statistics and the Pearson Product Moment Correlation Coefficient (PPMCC) at a 0.05 level of significance. The findings revealed that digital communication effectiveness and virtual trust building have strong positive and statistically significant relationships with promotive and upward voice behaviour. The study concludes that effective virtual leadership enhances employee voice behaviour and recommends strengthening digital communication, fostering virtual trust, and promoting supportive leadership practices to encourage employees to express constructive ideas and workplace concerns.

Keywords: Virtual Leadership, Digital Communication Effectiveness, Virtual Trust Building, Employee Voice Behaviour, Promotive Voice Behaviour.

INTRODUCTION

Rapid digital transformation has significantly changed how organisations coordinate work, communicate, and deliver services. In the banking sector, the widespread adoption of digital communication platforms, virtual collaboration tools, and hybrid work arrangements has shifted leadership from traditional face-to-face interactions to technology-enabled leadership practices (Contreras et al., 2020; Morrison-Smith & Ruiz, 2020). As deposit money banks increasingly rely on digital technologies to enhance operational efficiency and customer service, leaders are expected to communicate effectively, build trust remotely, and maintain employee engagement despite reduced physical interaction.

Virtual leadership refers to the ability of leaders to influence, coordinate, and support employees through digital communication technologies in geographically dispersed or technology-mediated work environments (Contreras et al., 2020). Effective virtual leadership enables timely communication, collaboration, and decision-making, while minimizing the communication challenges associated with remote and hybrid work (Morrison-Smith & Ruiz, 2020). Within the banking industry,

where employees depend heavily on digital platforms for daily operations, leadership effectiveness increasingly depends on leaders' ability to communicate clearly and foster trust in virtual environments.

Digital communication effectiveness and virtual trust building are two important dimensions of virtual leadership. Digital communication effectiveness involves providing clear, timely, and accurate information through digital channels, enabling employees to understand expectations and contribute meaningfully to organisational activities. Virtual trust building reflects leaders' ability to demonstrate transparency, reliability, fairness, and support, thereby creating psychologically safe environments that encourage collaboration and knowledge sharing (Breuer et al., 2020). Studies have shown that trust and effective digital communication strengthen employee commitment, teamwork, and organisational outcomes (Contreras et al., 2020).

Employee voice behaviour has become increasingly important because organisations depend on employees' ideas and feedback to improve innovation, service quality, and decision-making. It refers to the voluntary expression of constructive suggestions, opinions, or concerns intended to improve organisational effectiveness (Morrison, 2023). This study examines employee voice behaviour through promotive voice behaviour, which focuses on proposing innovative ideas for improvement, and upward voice behaviour, which reflects employees' willingness to communicate suggestions and concerns to management (Chamberlin et al., 2022; Tan et al., 2023). Such behaviours are particularly valuable in deposit money banks, where continuous improvement and responsiveness are essential for sustaining competitiveness.

In Rivers State, deposit money banks increasingly utilize virtual communication systems, electronic reporting platforms, and digital management practices to support daily operations. Although these technologies have improved efficiency, concerns remain regarding whether virtual leadership practices encourage employees to speak up with innovative ideas and constructive feedback. Existing studies have largely focused on virtual teams, remote work, and employee performance, with limited attention to the relationship between virtual leadership and employee voice behaviour in the Nigerian banking sector (Contreras et al., 2020; Morrison-Smith & Ruiz, 2020). Consequently, this study investigates the relationship between virtual leadership and employee voice behaviour in deposit money banks in Rivers State.

Statement of the Problem

The rapid adoption of digital technologies has transformed leadership practices in the banking sector, with deposit money banks increasingly relying on virtual communication platforms, online collaboration tools, and technology-driven management systems to coordinate employees and deliver services (Contreras et al., 2020). Although these technologies have improved operational efficiency, they have also created challenges related to communication quality, leader–employee relationships, and trust in virtual work environments (Breuer et al., 2020).

Employee voice behaviour is essential for organisational learning, innovation, service improvement, and effective decision-making because it enables employees to share constructive ideas, suggestions, and work-related concerns (Morrison, 2023). However, employees may be reluctant to express their views when digital communication is ineffective or when trust in leaders is weak. Such conditions can reduce promotive and upward voice behaviour, limiting employees' contributions to organisational improvement and competitiveness (Chamberlin et al., 2022).

In Rivers State, deposit money banks have increasingly integrated digital communication systems into their operations, making virtual leadership an important aspect of organisational management. Despite this development, there is limited empirical evidence on how digital communication

effectiveness and virtual trust building influence employee voice behaviour within the Nigerian banking sector. Most existing studies have focused on virtual teams, remote work, and employee performance in developed economies, with little attention to deposit money banks in Rivers State (Contreras et al., 2020; Morrison-Smith & Ruiz, 2020). This empirical and contextual gap necessitated this study, which investigates the relationship between virtual leadership and employee voice behaviour in deposit money banks in Rivers State.

Purpose of the Study

The main purpose of this study is to examine the relationship between virtual leadership and employee voice behaviour in deposit money banks in Rivers State. Specifically, the study seeks to:

- i. Examine the relationship between digital communication effectiveness and promotive voice behaviour in deposit money banks in Rivers State.
- ii. Determine the relationship between digital communication effectiveness and upward voice behaviour in deposit money banks in Rivers State.
- iii. Examine the relationship between virtual trust building and promotive voice behaviour in deposit money banks in Rivers State.
- iv. Determine the relationship between virtual trust building and upward voice behaviour in deposit money banks in Rivers State.

Research Questions

The following research questions guide the study:

- i. What is the relationship between digital communication effectiveness and promotive voice behaviour in deposit money banks in Rivers State?
- ii. What is the relationship between digital communication effectiveness and upward voice behaviour in deposit money banks in Rivers State?
- iii. What is the relationship between virtual trust building and promotive voice behaviour in deposit money banks in Rivers State?
- iv. What is the relationship between virtual trust building and upward voice behaviour in deposit money banks in Rivers State?

Research Hypotheses

The following null hypotheses will be tested in the study:

- H01: There is no significant relationship between digital communication effectiveness and promotive voice behaviour in deposit money banks in Rivers State.
- H02: There is no significant relationship between digital communication effectiveness and upward voice behaviour in deposit money banks in Rivers State.
- H03: There is no significant relationship between virtual trust building and promotive voice behaviour in deposit money banks in Rivers State.
- H04: There is no significant relationship between virtual trust building and upward voice behaviour in deposit money banks in Rivers State.

Conceptual Framework

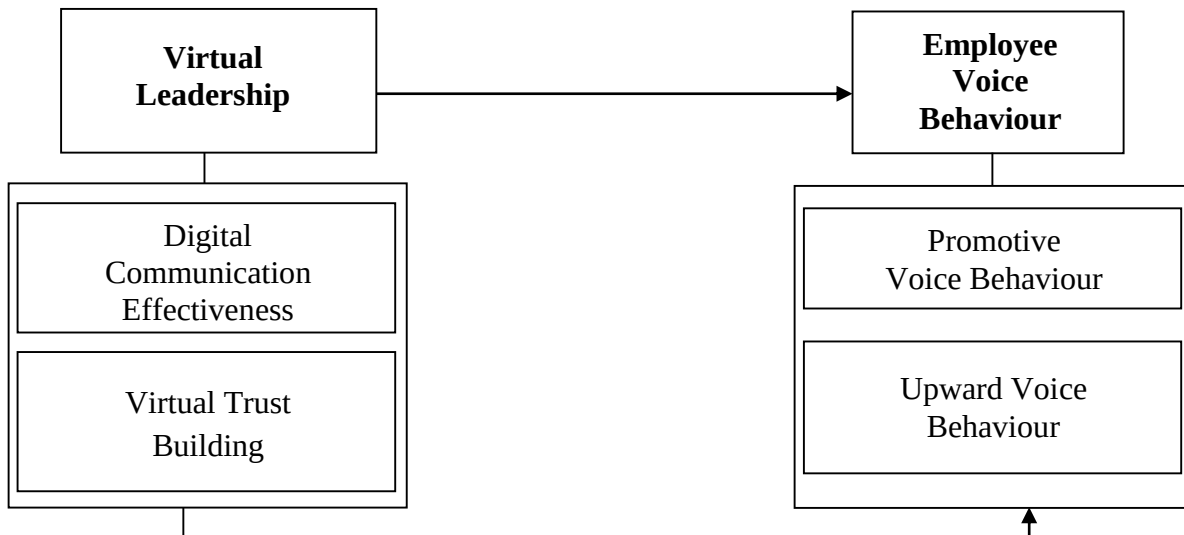


Figure 1: Conceptual Framework Showing the Relationship between Virtual Leadership and Employee Voice Behaviour in Deposit Money Banks in Rivers State.

Source: Virtual Leadership, comprising Digital Communication Effectiveness and Virtual Trust Building, was adapted from Contreras et al. (2020), Newman et al. (2020), Breuer et al. (2020), and Gilson et al. (2021). Employee Voice Behaviour, comprising Promotive Voice Behaviour and Upward Voice Behaviour, was adapted from Liang et al. (2012), Van Dyne and LePine (1998), and supported by Morrison (2023) and Chamberlin et al. (2022).

LITERATURE REVIEW

Conceptual Review

Concept of Virtual Leadership

Virtual leadership is the process through which leaders influence, coordinate, and support employees using digital communication technologies in remote, hybrid, or technology-mediated work environments (Contreras et al., 2020). As organisations increasingly adopt digital platforms for communication and collaboration, leadership effectiveness depends not only on technical competence but also on leaders' ability to maintain relationships, coordinate tasks, and motivate employees despite physical distance (Morrison-Smith & Ruiz, 2020). Unlike traditional leadership, virtual leadership relies on digital tools such as video conferencing, emails, instant messaging, and collaborative platforms to facilitate communication and organisational coordination. Effective virtual leaders communicate clearly, provide timely feedback, and create an environment that supports collaboration and employee engagement (Contreras et al., 2020). In the banking sector, where daily operations are highly technology-driven, virtual leadership has become essential for maintaining productivity and service quality. Research indicates that effective virtual leadership enhances employee commitment, collaboration, and organisational performance by promoting communication, trust, and supportive leader–employee relationships (Contreras et al., 2020). Consequently, virtual leadership is increasingly recognized as a strategic capability for organisations operating in digitally connected workplaces.

Digital Communication Effectiveness

Digital communication effectiveness refers to the extent to which leaders communicate accurate, timely, clear, and meaningful information through digital technologies to facilitate employee understanding and coordination (Klopfenstein et al., 2023). Effective digital communication reduces misunderstandings, promotes collaboration, and enables employees to receive prompt feedback and

organisational updates, thereby improving participation and work performance (Morrison-Smith & Ruiz, 2020).

In virtual work environments, communication quality significantly influences employees' perceptions of leadership. Leaders who maintain open, responsive, and transparent communication are more likely to foster employee confidence and encourage the sharing of ideas and concerns. Conversely, poor communication may create uncertainty, reduce engagement, and discourage employees from contributing valuable suggestions (Contreras et al., 2020). In deposit money banks, where most operational activities depend on electronic communication systems, effective digital communication is essential for enhancing employee participation and organisational effectiveness.

Virtual Trust Building

Virtual trust building is the process through which leaders establish confidence, reliability, transparency, and psychological safety in technology-mediated work environments (Breuer et al., 2020). Trust is particularly important in virtual settings because employees have fewer opportunities for face-to-face interaction and therefore rely heavily on leaders' consistency, responsiveness, and fairness during digital communication.

Leaders who demonstrate integrity, openness, and support through virtual interactions are more likely to strengthen employees' willingness to collaborate, share knowledge, and participate in organisational activities (Breuer et al., 2020). High levels of trust also reduce employees' fear of negative consequences when expressing opinions or reporting workplace concerns, thereby creating an environment that supports open communication and innovation (Edmondson & Mortensen, 2021). In deposit money banks, virtual trust is essential for sustaining collaboration, accountability, and effective communication within increasingly digital work environments.

Concept of Employee Voice Behaviour

Employee voice behaviour refers to employees' voluntary expression of constructive ideas, suggestions, opinions, or concerns intended to improve organisational functioning and decision-making (Morrison, 2023). Rather than criticizing organisational practices, voice behaviour emphasizes proactive communication that supports innovation, problem-solving, and continuous improvement. In knowledge-intensive sectors such as banking, employee voice enables organisations to identify operational challenges, improve service quality, and respond effectively to changing customer needs. Employee voice is strongly influenced by leadership, communication, trust, and psychological safety. Employees are more willing to speak up when leaders encourage participation, value employees' contributions, and create supportive work environments where individuals do not fear negative consequences for expressing their views (Morrison, 2023; Edmondson & Mortensen, 2021). Consequently, fostering employee voice has become an important strategy for enhancing organisational learning and performance.

Promotive Voice Behaviour

Promotive voice behaviour refers to employees' proactive expression of new ideas, recommendations, and constructive suggestions aimed at improving organisational processes, efficiency, and performance (Chamberlin et al., 2022). It is future-oriented because employees focus on identifying opportunities for improvement rather than merely pointing out existing problems. In the banking sector, promotive voice behaviour contributes to service innovation, operational efficiency, and customer satisfaction. Employees who regularly interact with customers and banking technologies are well positioned to identify improvement opportunities. Research indicates that supportive leadership, open communication, and psychological safety significantly encourage employees to engage in promotive voice behaviour (Morrison, 2023).

Upward Voice Behaviour

Upward voice behaviour refers to employees' willingness to communicate ideas, concerns, and work-related feedback directly to supervisors or senior management to improve organisational effectiveness (Tan et al., 2023). It reflects employees' confidence that their opinions will be heard, respected, and considered during decision-making. Employees are more likely to demonstrate upward voice behaviour when they trust their leaders and perceive the workplace as psychologically safe (Tan et al., 2023). Within deposit money banks, upward voice enables management to receive valuable information on customer experiences, operational risks, and service challenges, thereby supporting better decisions and organisational performance.

Virtual Leadership and Employee Voice Behaviour

Virtual leadership plays an important role in shaping employee voice behaviour in technology-enabled workplaces. Leaders who communicate clearly through digital platforms, provide timely feedback, and build trust are more likely to create psychologically safe environments where employees willingly share ideas and concerns (Contreras et al., 2020). Conversely, ineffective digital communication and low trust may discourage employees from expressing constructive opinions. In deposit money banks, where digital communication is central to daily operations, effective virtual leadership can strengthen both promotive and upward voice behaviour by enhancing communication quality, trust, and employee participation. Thus, organisations that invest in effective virtual leadership practices are better positioned to promote innovation, organisational learning, and improved service delivery.

Theoretical Framework

Leader-Member Exchange (LMX) Theory

This study is anchored on the Leader-Member Exchange (LMX) Theory, developed by George B. Graen and Mary Uhl-Bien. The theory posits that leaders develop different quality relationships with employees, and these relationships influence employees' attitudes and workplace behaviours. High-quality leader-member relationships are characterized by trust, mutual respect, open communication, and support, leading to greater commitment, engagement, and discretionary behaviours (Martin et al., 2022).

Recent evidence indicates that employees who enjoy high-quality exchanges with their leaders are more likely to exhibit proactive behaviours, including speaking up with ideas and suggestions that improve organisational performance (Breevaart et al., 2021). In virtual work environments, leaders establish these relationships primarily through effective digital communication and trust-building. When employees perceive virtual leaders as accessible, transparent, and supportive, they are more willing to engage in promotive and upward voice behaviour.

The LMX theory is therefore appropriate for this study because it explains how digital communication effectiveness and virtual trust building strengthen leader-employee relationships, thereby encouraging employees in deposit money banks to express constructive ideas, concerns, and recommendations.

Empirical Review

Contreras, Francoise et al. (2020) examined e-leadership in virtual work environments and found that effective virtual leadership enhanced communication, collaboration, and employee participation. However, the study did not examine employee voice behaviour in the Nigerian banking sector.

Breuer, Christoph et al. (2020) reported that trust significantly improved collaboration and communication in virtual teams, suggesting that trust is fundamental to effective virtual leadership. Nevertheless, their study did not focus on employee voice behaviour.

Chamberlin, Marisa et al. (2022), through a meta-analysis, found that supportive organisational environments significantly increased promotive voice behaviour. However, the study did not examine virtual leadership dimensions.

Tan, Huiling et al. (2023) established that psychological safety and supportive leadership positively influenced employees' upward voice behaviour. Although relevant, the study was conducted outside the Nigerian banking context.

Finally, Morrison, Elizabeth Wolfe (2023) concluded that leadership support and psychologically safe work environments are key predictors of employee voice behaviour across organisations. Despite these contributions, limited empirical evidence exists on the relationship between virtual leadership—particularly digital communication effectiveness and virtual trust building—and employee voice behaviour in deposit money banks in Rivers State, thereby justifying the present study.

METHODOLOGY

This study adopted a correlational research design to examine the relationship between virtual leadership and employee voice behaviour in selected deposit money banks in Rivers State, Nigeria. The study population comprised 650 management and non-management employees drawn from 10 selected deposit money banks operating in Rivers State. The banks were purposively selected because they have a strong operational presence, sizeable workforces, and extensive use of virtual leadership practices and digital communication technologies in their daily operations. They also provided adequate representation of the deposit money banking sector in the state and were accessible for data collection, ensuring that respondents possessed relevant experience with virtual leadership and employee voice behaviour. The population included employees working in operations, customer service, information technology, human resource management, marketing, finance, administration, and electronic banking. A sample size of 248 respondents was determined using the Taro Yamane (1967) formula, and a stratified random sampling technique was employed to ensure adequate representation.

A total of 248 (100%) questionnaires were distributed, 235 (94.76%) were retrieved, 13 (5.24%) were not returned, 0 (0%) were invalid, and 235 (94.76%) valid questionnaires were used for the analysis.

Primary data were collected through a structured questionnaire, while secondary data were obtained from textbooks, journals, conference papers, scholarly articles, and relevant internet sources. The questionnaire comprised demographic items and measures of digital communication effectiveness, virtual trust building, promotive voice behaviour, and upward voice behaviour using a five-point Likert scale. The instrument was validated through face and content validity by experts, while reliability was established using the Cronbach Alpha method, with a coefficient of 0.70 and above considered acceptable. Data were collected through direct questionnaire administration with trained research assistants. Virtual leadership was measured using digital communication effectiveness and virtual trust building, while employee voice behaviour was measured using promotive voice behaviour and upward voice behaviour. Data were analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation) and the Pearson Product Moment Correlation Coefficient (PPMCC) using SPSS. The null hypothesis was rejected where $p < 0.05$ and accepted where $p > 0.05$. Ethical standards, including informed consent, voluntary participation, confidentiality, anonymity, and the use of information solely for academic purposes, were strictly observed throughout the study.

Sample Size

The sample size for the study was determined using the Taro Yamane (1967) formula for finite population:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size

N = Population size (650)

e = Level of significance (0.05)

Substituting the values into the formula:

$$n = \frac{650}{1 + 650(0.05)^2}$$

$$n = \frac{650}{1 + 650(0.0025)}$$

$$n = \frac{650}{1 + 1.625}$$

$$n = \frac{650}{2.625}$$

$$n = 247.62$$

$$n \approx 248$$

Therefore, the sample size for the study is 248 respondents.

Population of the Study

Table 1: Sample Size Allocation and Questionnaire Distribution among Selected Deposit Money Banks in Rivers State

S/ N	Selected Deposit Money Banks	Locatio n	Populatio n	Sample Size	Questionnai re Distributed	Questionnai re Retrieved	Questionnai re Used
1	First Bank of Nigeria Limited	Rivers State	75	29	29	28	28
2	Zenith Bank Plc	Rivers State	70	27	27	26	26
3	Access Bank Plc	Rivers State	65	25	25	24	24
4	United Bank for Africa Plc	Rivers State	60	23	23	22	22
5	Fidelity Bank Plc	Rivers State	65	25	25	24	24
6	Guaranty Trust Bank Limited	Rivers State	70	27	27	26	26
7	Union Bank of Nigeria Plc	Rivers State	60	23	23	22	22
8	Stanbic IBTC Bank Plc	Rivers State	55	21	21	20	20

9	FCMB	Rivers State	65	25	25	23	23
10	Ecobank Nigeria Limited	Rivers State	65	23	23	20	20
	Total		650	248	248	235	235

Source: Researcher's Field Survey, 2026.

Table 2: Variables Measurement/Operationalization

S/N	Variables	Dimensions/Measures	Number of Items	Cronbach's Alpha
1	Virtual Leadership	Digital Communication Effectiveness	5	0.851
		Virtual Trust Building	5	0.864
2	Employee Voice Behaviour	Promotive Voice Behaviour	5	0.873
		Upward Voice Behaviour	5	0.859
	Overall Reliability Coefficient		20	0.862

Source: Researcher's Field Survey, 2026.

The reliability results indicate that all constructs are internally consistent and reliable, with Cronbach's alpha values of 0.851 for digital communication effectiveness, 0.864 for virtual trust building, 0.873 for promotive voice behaviour, and 0.859 for upward voice behaviour, all exceeding the acceptable benchmark of 0.70. The overall reliability coefficient of 0.862 confirms that the instrument is reliable for data collection and analysis.

Table 3: Response Rate of Questionnaire Distribution and Retrieval

Details	Frequency	Percentage
Number of Copies Distributed	248	100%
Number of Copies Retrieved	235	94.76%
Number of Copies Not Returned	13	5.24%
Number of Copies Invalid	0	0%
Number of Copies Used for Analysis	235	94.76%

Source: Researcher's Field Survey, 2026.

The table shows that 248 questionnaires were administered to respondents across selected deposit money banks in Rivers State. A total of 235 questionnaires were successfully retrieved, representing a response rate of 94.76%, while all retrieved questionnaires were found valid and used for analysis. This indicates a high response rate, suggesting that the data collected were adequate and suitable for statistical analysis and hypothesis testing.

DATA RESULTS

Table 4: Descriptive Statistics on Digital Communication Effectiveness

S/N	Digital Communication Effectiveness Items	N	Min.	Max.	Sum	Mean	Std. Dev.
1	Leaders communicate work expectations clearly through digital platforms	235	1.0	5.0	973.0	4.140	0.7865

2	Employees receive timely feedback through virtual communication systems	235	1.0	5.0	968.0	4.119	0.8013
3	Digital communication improves coordination between management and employees	235	1.0	5.0	981.0	4.174	0.7728
4	Virtual communication channels enhance employee participation in organisational activities	235	1.0	5.0	964.0	4.102	0.8096
5	Effective digital communication reduces misunderstandings in the workplace	235	1.0	5.0	987.0	4.200	0.7584
	Valid N (listwise)	235					

Source: SPSS (Version 27) Result, 2026.

Table 5: Descriptive Statistics on Virtual Trust Building

S/N	Virtual Trust Building Items	N	Min.	Max.	Sum	Mean	Std. Dev.
1	Leaders demonstrate transparency during digital interactions	235	1.0	5.0	975.0	4.149	0.7837
2	Employees trust information communicated through virtual platforms	235	1.0	5.0	969.0	4.123	0.7985
3	Management demonstrates fairness and consistency in virtual communication	235	1.0	5.0	983.0	4.183	0.7701
4	Employees feel psychologically safe communicating with leaders virtually	235	1.0	5.0	966.0	4.111	0.8064
5	Virtual trust enhances cooperation between leaders and employees	235	1.0	5.0	990.0	4.213	0.7548
	Valid N (listwise)	235					

Source: SPSS (Version 27) Result, 2026.

Table 6: Descriptive Statistics on Promotive Voice Behaviour

S/N	Promotive Voice Behaviour Items	N	Min.	Max.	Sum	Mean	Std. Dev.
1	Employees frequently suggest new ideas for improving banking operations	235	1.0	5.0	972.0	4.136	0.7891
2	Employees willingly recommend innovative solutions to workplace challenges	235	1.0	5.0	979.0	4.166	0.7754
3	Employees actively contribute suggestions for improving customer service delivery	235	1.0	5.0	986.0	4.196	0.7617
4	Employees openly discuss ideas capable of improving organisational effectiveness	235	1.0	5.0	968.0	4.119	0.7998
5	Promotive voice behaviour enhances innovation within the organisation	235	1.0	5.0	992.0	4.221	0.7525

	Valid N (listwise)	235					
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Source: SPSS (Version 27) Result, 2026.

Table 7: Descriptive Statistics on Upward Voice Behaviour

S/N	Upward Voice Behaviour Items	N	Min.	Max.	Sum	Mean	Std. Dev.
1	Employees confidently communicate concerns to management	235	1.0	5.0	974.0	4.145	0.7853
2	Employees feel comfortable expressing opinions to organisational leaders	235	1.0	5.0	980.0	4.170	0.7732
3	Employees regularly provide feedback to management regarding workplace issues	235	1.0	5.0	987.0	4.200	0.7596
4	Employees are encouraged to communicate suggestions to management	235	1.0	5.0	969.0	4.123	0.7971
5	Upward voice behaviour improves organisational decision-making	235	1.0	5.0	994.0	4.230	0.7484
	Valid N (listwise)	235					

Source: SPSS (Version 27) Result, 2026.

The results from Tables 4 to 7 show that respondents generally agreed that virtual leadership significantly influences employee voice behaviour in selected deposit money banks in Rivers State. Digital communication effectiveness recorded high mean values, indicating that leaders communicate clearly through virtual platforms, provide timely feedback, and enhance organisational coordination through digital communication systems. Virtual trust building also recorded high mean scores, suggesting that employees perceive leaders as transparent, supportive, fair, and trustworthy during virtual interactions. Similarly, promotive voice behaviour and upward voice behaviour recorded high mean values, indicating that employees actively suggest innovative ideas, contribute constructive recommendations, and communicate concerns and feedback to management within the workplace. The findings further suggest that digital communication effectiveness and virtual trust building influence employee voice behaviour by encouraging promotive voice behaviour and upward voice behaviour in deposit money banks in Rivers State.

Inferential Statistical Analysis

The Pearson Product Moment Correlation Coefficient (PPMCC) was employed as the inferential statistical tool for testing the hypotheses of this study. This method was considered appropriate because it measures the strength and direction of the linear relationship between continuous variables derived from Likert-scale responses. The analysis examined the relationship between virtual leadership (digital communication effectiveness and virtual trust building) and employee voice behaviour (promotive voice behaviour and upward voice behaviour) among employees in deposit money banks in Rivers State. All hypotheses were tested at a 0.05 level of significance using SPSS Version 27.

Table 8: Digital Communication Effectiveness and Promotive Voice Behaviour

Pearson Correlation		Digital Communication Effectiveness	Promotive Voice Behaviour
Digital Communication Effectiveness	Correlation Coefficient	1.000	0.741**
	Sig. (2-tailed)	.	0.000
	N	235	235
Promotive Voice Behaviour	Correlation Coefficient	0.741**	1.000
	Sig. (2-tailed)	0.000	.
	N	235	235
Correlation is significant at the 0.01 level (2-tailed).			

Source: SPSS (Version 27) Result, 2026.

Table 9: Digital Communication Effectiveness and Upward Voice Behaviour

Pearson Correlation		Digital Communication Effectiveness	Upward Voice Behaviour
Digital Communication Effectiveness	Correlation Coefficient	1.000	0.723**
	Sig. (2-tailed)	.	0.000
	N	235	235
Upward Voice Behaviour	Correlation Coefficient	0.723**	1.000
	Sig. (2-tailed)	0.000	.
	N	235	235
Correlation is significant at the 0.01 level (2-tailed).			

Source: SPSS (Version 27) Result, 2026.

Table 10: Virtual Trust Building and Promotive Voice Behaviour

Pearson Correlation		Virtual Trust Building	Promotive Voice Behaviour
Virtual Trust Building	Correlation Coefficient	1.000	0.756**
	Sig. (2-tailed)	.	0.000
	N	235	235
Promotive Voice Behaviour	Correlation Coefficient	0.756**	1.000
	Sig. (2-tailed)	0.000	.
	N	235	235
Correlation is significant at the 0.01 level (2-tailed).			

Source: SPSS (Version 27) Result, 2026.

Table 11: Virtual Trust Building and Upward Voice Behaviour

Pearson Correlation		Virtual Trust Building	Upward Voice Behaviour
Virtual Building	Trust	Correlation Coefficient	1.000
		Sig. (2-tailed)	0.738**
		N	235
Upward Behaviour	Voice	Correlation Coefficient	0.738**
		Sig. (2-tailed)	1.000
		N	235
Correlation is significant at the 0.01 level (2-tailed).			

Source: SPSS (Version 27) Result, 2026.

The results presented in Tables 8 to 11 reveal a strong positive and statistically significant relationship between virtual leadership and employee voice behaviour among employees in deposit money banks in Rivers State. Specifically, Table 8 shows that digital communication effectiveness has a strong positive relationship with promotive voice behaviour ($r = 0.741$, $p < 0.01$). This implies that employees who experience clear, timely, and interactive digital communication from organisational leaders are more likely to suggest innovative ideas and constructive solutions capable of improving organisational effectiveness.

Table 9 reveals a strong positive and significant relationship between digital communication effectiveness and upward voice behaviour ($r = 0.723$, $p < 0.01$). This indicates that effective digital communication enhances employees' willingness to communicate opinions, feedback, and workplace concerns directly to management within deposit money banks.

Table 10 shows that virtual trust building has a strong positive relationship with promotive voice behaviour ($r = 0.756$, $p < 0.01$), suggesting that employees who perceive leaders as trustworthy, transparent, and supportive within virtual environments are more likely to contribute innovative suggestions and improvement-oriented ideas within the workplace.

Finally, Table 11 indicates a strong positive relationship between virtual trust building and upward voice behaviour ($r = 0.738$, $p < 0.01$). This implies that employees who trust organisational leaders are more confident in communicating concerns, recommendations, and feedback to management without fear of negative consequences.

Generally, the findings indicate that virtual leadership, particularly digital communication effectiveness and virtual trust building, significantly improves employee voice behaviour by encouraging promotive voice behaviour and upward voice behaviour among employees in deposit money banks in Rivers State.

Summary of Hypotheses

Table 12: Summary of Hypothesis Testing

S/N	Hypothesis	Result	Decision
H01	There is no significant relationship between digital communication effectiveness and promotive voice behaviour in deposit money banks in Rivers State.	$r = 0.741$, $p\text{-value} = 0.000$	Reject H01 since $p\text{-value} < 0.05$

H02	There is no significant relationship between digital communication effectiveness and upward voice behaviour in deposit money banks in Rivers State.	$r = 0.723$, $p\text{-value} = 0.000$	Reject H02 since $p\text{-value} < 0.05$
H03	There is no significant relationship between virtual trust building and promotive voice behaviour in deposit money banks in Rivers State.	$r = 0.756$, $p\text{-value} = 0.000$	Reject H03 since $p\text{-value} < 0.05$
H04	There is no significant relationship between virtual trust building and upward voice behaviour in deposit money banks in Rivers State.	$r = 0.738$, $p\text{-value} = 0.000$	Reject H04 since $p\text{-value} < 0.05$

Source: Researcher's Field Survey and SPSS Output (Version 27, 2026).

Discussion of Findings

The findings of this study reveal that virtual leadership significantly influences employee voice behaviour among employees in deposit money banks in Rivers State. Specifically, digital communication effectiveness and virtual trust building were found to have strong positive relationships with promotive voice behaviour and upward voice behaviour. These findings are consistent with existing literature which emphasizes that effective communication and trust within virtual work environments encourage employee participation, openness, and constructive workplace behaviour (Contreras et al., 2020; Morrison, 2023). A strong positive relationship was found between digital communication effectiveness and promotive voice behaviour ($r = 0.741$), indicating that employees who receive clear, timely, and supportive communication through digital platforms are more likely to suggest innovative ideas and constructive recommendations capable of improving organisational performance. This finding supports previous studies which show that effective communication enhances employee participation, collaboration, and workplace innovation (Newman et al., 2020). Similarly, digital communication effectiveness showed a strong positive relationship with upward voice behaviour ($r = 0.723$), suggesting that employees operating within effective digital communication environments are more willing to communicate concerns, opinions, and feedback directly to management. This aligns with studies which report that supportive communication systems improve employee confidence and organisational openness (Tan et al., 2023). Furthermore, virtual trust building demonstrated a strong positive relationship with promotive voice behaviour ($r = 0.756$), indicating that employees who trust their leaders are more likely to contribute creative suggestions and workplace improvement ideas. This finding is supported by studies which reveal that trust enhances psychological safety, employee collaboration, and organisational participation within virtual environments (Breuer et al., 2020).

In addition, virtual trust building also showed a strong positive relationship with upward voice behaviour ($r = 0.738$), implying that employees who perceive leaders as transparent, supportive, and trustworthy are more confident in communicating concerns and feedback to management. This finding is consistent with earlier studies which argue that trust encourages employee openness and constructive workplace communication (Zakaria et al., 2021).

Finally, the findings confirm that virtual leadership, particularly digital communication effectiveness and virtual trust building, plays a significant role in improving employee voice behaviour among employees in deposit money banks in Rivers State. These leadership practices encourage employees to express innovative ideas, workplace concerns, and constructive feedback capable of improving organisational effectiveness and service delivery.

CONCLUSION

The study concludes that virtual leadership has a significant positive relationship with employee voice behaviour among employees in deposit money banks in Rivers State. Specifically, digital communication effectiveness and virtual trust building were found to significantly improve promotive voice behaviour and upward voice behaviour within the workplace. This implies that employees who

experience effective digital communication, leadership transparency, and supportive virtual relationships are more likely to communicate innovative ideas, constructive suggestions, and workplace concerns capable of improving organisational performance. Therefore, virtual leadership represents an important organisational factor capable of enhancing employee participation, communication, and organisational effectiveness within deposit money banks.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made in line with the objectives, research questions, and hypotheses:

1. Management of deposit money banks in Rivers State should establish effective digital communication systems capable of promoting clear, timely, and interactive communication between leaders and employees in order to encourage employee voice behaviour.
2. Organisational leaders should develop trust-building practices such as transparency, responsiveness, fairness, and supportive virtual interactions to improve employees' confidence in communicating ideas and workplace concerns.
3. Human resource departments should organise regular training programmes on virtual communication, employee participation, and leadership relationship management to strengthen promotive and upward voice behaviour within the banking sector.
4. Deposit money banks should create psychologically safe work environments where employees feel comfortable expressing innovative suggestions, feedback, and operational concerns without fear of victimization or negative consequences.

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