



Digitalization and Employees' Performance: Evidence from Mobile Telephone Network (MTN) Southeast, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study examined the effect of digitalization on employees' performance in MTN Southeast, Nigeria. Specifically, the study ascertained the effect of digital based performance management (DBPM) on employees' contextual performance in MTN. The study used survey research design; primary data were elicited with the help of well-structured questionnaire entitled: "Digitalization and Employees' Performance Questionnaire." The study population involved all the MTN Nigeria employees in Southeast Nigeria. The study made use of random sampling techniques and purposive sampling techniques. Content and face validity were used to validate the study instrument, while Cronbach Alpha reliability technique was used to test the reliability of the study

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instrument. Descriptive statistics were used to analyze the data obtained from the field. Ordinary Least Square Regression analysis was used to test the study hypotheses. Major finding revealed that; at 1% level (Sig < .01) of significance, DBPM had a positive and significant effect on employees' contextual performance in MTN. The study concluded that digitalization had a positive and significant effect on employee's performance in MTN Southeast, Nigeria. The study recommended that the management of MTN needs to uphold their DBPM as it significantly affects employees' contextual performance. However, they should implement DBPM that enables real-time feedback and leverage on performance analytics within the digital system to evaluate contextual performance trends. Also, they need to ensure that the DBPM platform has a user-friendly interface, a seamless and intuitive experience to encourages active engagement, making it easier for employees to utilize the system for self-assessment and improvement.

Keywords: Digitalization; employees' performance; MTN Nigeria.

1. INTRODUCTION

Digitalization is *sine qua non* to employees' performance in the telecommunication organizations like Mobile Telephone Network (MTN) Nigeria. The telecommunications industry is the vanguard of digital transformation, with rapid advancements shaping the way organizations operate and deliver services. Digitalization in telecom encompasses a spectrum of technologies, including but not limited to, artificial intelligence, big data analytics, cloud computing, and the Internet of Things (IoT). These technologies not only enhance operational efficiency and customer experience but also profoundly influence the roles and responsibilities of employees. Digitalization in the telecom industry evolves from the mid-20th century with the invention and development of digital technologies like pulse-code modulation (PCM). PCM, developed in the 1930s and 1940s, paved the way for encoding analog signals into digital form, which was crucial for the evolution of telecommunications. In the 1960s and 1970s, digital switching systems began to replace older analog systems, leading to increased efficiency, reliability, and capacity in telecommunications networks. This transition laid the groundwork for further digital innovations in the industry. Another significant milestone was the introduction of Integrated Services Digital Network (ISDN) in the 1980s, which provided digital transmission of voice, video, and data over traditional telephone lines [1].

By the late 20th century, advancements in digital technology, such as the development of digital subscriber line (DSL) and fiber-optic networks, further revolutionized the telecom industry, enabling high-speed internet access and multimedia communication services. There has been a paradigm shift in the telecom industry

digitalization, from analog to digital technology, driven by the need for more efficient and reliable communication systems. This transition continues to shape the industry today, with ongoing advancements in digital technologies such as 5G networks and the Internet of Things. Digitalization sets new dimensions and ways of doing business not only in digital realities, but also about new approach of performing traditional processes and functions [2]. One of the key effects of digitalization on employee performance in telecom organizations is the shift towards a more dynamic and agile work environment. Digital tools and platforms enable employees to collaborate seamlessly across geographical boundaries, access real-time data for informed decision-making, and automate repetitive tasks, thereby freeing up time for more strategic endeavours. Furthermore, digitalization empowers employees with the tools and resources to enhance their skill sets and adapt to evolving job requirements. Training programmes and learning platforms leveraging virtual reality technologies enable employees to upskill or reskill in response to technological advancements, ensuring their continued relevance and effectiveness in the digital era [3].

MTN Nigeria adopted digital platform to gain end-to-end customer experience, optimization of service activities, gaining operational flexibility, managing innovations and launching innovative business model. The rapid pace of technological change in MTN Nigeria necessitates continuous learning and adaptation, placing a demand on employees to remain abreast of emerging trends and best practices. Thus, understanding the interplay between digitalization and employee performance in MTN Nigeria is imperative for fostering a culture of innovation, resilience, and growth. Drawing from the above, this study: Digitalization and employees' performance;

evidence from MTN Southeast, Nigeria, examine the opportunities and challenges with harnessing the power of digitalization to enhance employee performance.

1.1 Statement of the Problem

Digitalization is concerned with information processing, and because everything can be converted into information, it has an impact on all human and organisational activities. It is widespread, affecting practically every area, and is fundamentally changing the economy and shaping modern society. Chen, et al., [3] stated that digitalization in the workplace poses new challenges in relation to sustaining employee engagement, it makes organisations' operations more complex and the required speed to adapt to technological developments leads to employees' job foiling. In digital platform, individual habits that are manifestations of an individual's work style have a positive or negative effect on efficiency and overall job performance. Also, digitalization may lead to hectic pace of work, multitasking, interruptions that may translate into technostress and may obstruct employees' performance. There might be potential negative effects of increased digital communication and collaboration, such as information overload and distractions, which might affect employees' ability to focus on critical tasks [3].

MTN Nigeria undergone significant digital transformation, marked by the adoption of advanced technologies and digitalization processes, digital based performance management and virtual management. This shift has undoubtedly influenced various facets of organizational dynamics, including employee performance as it involved permanent access, control and possible blurring of work-life boundaries, increase in challenges relating to the health, safety, and well-being of employees which may hamper employees' contextual and adaptive performance. Thus, key questions arising include: How does digitalization influence the skill sets required by employees to perform effectively in their roles? How does the implementation of digital based performance management and virtual management affect employees' contextual and adaptive performance in MTN Nigeria? Addressing these questions will provide valuable insights into the complex relationship between digitalization and employee performance in MTN Nigeria. Understanding these dynamics, will help MTN Nigeria develop strategies to optimize employee performance

and leverage digital technologies effectively to stay competitive in the industry. Furthermore, the specific effects of digitalization on employee performance in telecom organizations are relatively unexplored and merit further empirical investigation.

1.2 Objective of the Study

The broad objective of this study is to evaluate the effect of digitalization on employees' performance: Evidence from MTN Southeast, Nigeria. The specific objectives of the study are to:

- i. evaluate the effect of digital based performance management on employees' contextual performance in MTN Southeast, Nigeria.
- ii. examine the effect of virtual management on employees' adaptive performance in MTN Southeast, Nigeria.

Hypotheses of the Study

The following null hypotheses were tested:

HO₁: Digital based performance management does not have any significant effect on employees' contextual performance in MTN Southeast, Nigeria.

HO₂: Virtual management has no significant effect on employees' adaptive performance in MTN Southeast, Nigeria.

2. REVIEW OF RELATED LITERATURE

2.1 Digitalization

"Digitization means converting analog data and processes into a format that a machine can read. In contrast, the term digital means the use and interrelationship of digital technologies and data to bring about new changes. Developed physical systems, innovated business models and new processes, creating smart products and services" [4]. "Digitalisation is a complex process that requires the commitment of all organizational resources: human, physical, organisational, and technological to apply digital technologies throughout the organisation, especially in operations" [5,6].

2.2 Employees' Performance

Vithanage and Arachchige [7], "defined performance as objective functional behaviour

because of forces or pressures resulting from the individual and as the interaction and harmony between the internal forces of the individual and the external forces surrounding him". "Employee performance refers to how workers behave in the workplace and how well they perform the job duties obligated to them" [8].

2.3 Adaptive Performance

"An individual's ability to acclimatise and provide necessary support to the job profile in a dynamic work situation is referred to as adaptive performance" [9]. "An effective adaptive performance necessitates employees' ability to efficiently deal with volatile work circumstances" [10].

2.4 Contextual Performance

Contextual performance is a kind of prosocial behaviour demonstrated by individuals in a work set-up. Such behaviours are expected of an employee, but they are not overtly mentioned in one's job description. These kind of unstated expectations are called prosocial behaviour or extra role behaviour. Brief, and Motowidlo cited in Rabindra and Lalatendu, [9], defined it as a behaviour that is: accomplished by a member of an organization; such behaviour is performed with the intention of encouraging the betterment of individual, group, or organisation.

2.5 Digital Based Performance Management and Employees Performance

"Performance is the result of work produced by performance employees" [11]. "Measurement of employee performance is very important to ensure that the employee can perform the task that has been given by the organisation or company. It is stated that employees are more likely to turnover if they are not satisfied and hence demotivated to show good performance" [12]. "Performance management applies a management concept that has a representative and aspirational level of flexibility to realize the vision and mission of the company by using the human resources in the organisation to the maximum" [13]. "In the era of globalisation as it is today the organisation or company is expected to be able to apply several concepts of digital-based work management, this can improve the performance or productivity of employees" [14].

2.6 Virtual Leadership/Management

"As information technology developed, the concept of leadership was re-imagined as virtual leadership, and this re-imagination was impacted by the transformation in the industrial world" [15]. "Using information technology, virtual leadership accomplishes the same objectives as conventional leadership. Virtual management is defined as "the supervision, leadership and maintenance of virtual teams and employees which was brought about by the rise of internet, globalisation and telecommuting" [16].

2.7 Virtual Management and Employee Performance

Virtual management defined as "the supervision, leadership and maintenance of virtual teams and employees which was brought about by the rise of the internet, globalization, outsourcing and telecommuting [16]. "It is recognized as the management of frequently widely dispersed groups and individuals with rarely, if ever, meeting them face to face" [16]. "It is a high-risk strategy unless corporations are committed, and it requires investment in technology as well as in team training. Commitment, investments, and training are essential, but they must be accompanied by measures that reduce uncertainty of virtual contacts and activities" [16].

2.8 Empirical Review

Buthina, Sejoon, Sager and Sakher [17], "measured and analyze digitalization's impact on employee performance in Greater Tafila Municipality. The study community consisted of all workers in Greater Tafila Municipality and its (5) administrative regions. To achieve the study's objectives and test its assumptions, a questionnaire was prepared and used as the main tool for data collection. The field study was conducted on a sample of (167) people, and the number of valid questionnaires for analysis was (160). Statistical methods, such as arithmetic averages, standard deviations, Cronbach alpha, and stability coefficient, were applied. The study concluded a positive correlation between digitalization and employee performance at the significant level".

Hamied, Farida, Muhammad and Uning [18], analyzed "the direct and indirect effects of the implementation of electronic performance management on key performance indicators, through mediation of employee job satisfaction

and work engagement scale for employees at PT Pelindo I. The approach of the study was descriptive qualitative. Sampling was done through a purposive sampling method. Data collected from the results of the questionnaire as many as 537 were then analyzed and tested using a variance-based Structural Equation Model (SEM) analysis technique, namely Partial Least Square (PLS) and processed using AMOS 20.0 software. The results showed that: Electronic performance management had a positive and significant effect on job satisfaction. Job satisfaction has a positive and significant effect on job Engagement. Job satisfaction has a positive and significant effect on key performance indicators”.

Putu, Ni and Ni [19], “focused on digital-based performance management concept within an effort to improve employee performance BUMDes during the Covid-19 Pandemic. The purpose of the study was to know the performance of employees through the concept of work management and digitization as the main key to improving the performance of BUMDes employees in Buleleng Regency. The research population is all BUMDes active in Buleleng Regency. Random sampling techniques was used. The data analysis technique used in the study was component-based SEM analysis method, Partial Least Square (PLS). The results showed that work management has an effect on digitalization and employee performance, by increasing employee performance, then BUMDes will contribute better in service and increase the village's original income (PAD)”.

Okechukwu, Egbo and Isikuru [16], examined “the effect of virtual management on employee performance in selected e-business in Lagos State, Nigeria. The specific objectives of the study included: to determine the extent to which virtual communication affects employees' effectiveness and ascertain the extent to which virtual collaboration affects employees' productivity. The study adopted the survey design. Four selected e-commerce firms in Lagos state, Nigeria were used for the study. The population of the study was 414 staff of the four e-commerce firms which were selected purposively because they are the major e-commerce firms in Nigeria. The sources of data for the study were primary and secondary sources. Data collected were analyzed using simple linear regression analysis and ANOVA at 5% profitability level of significance. The findings revealed that: Virtual communication had a

significant positive effect on employees' effectiveness in selected e-commerce firms in Lagos State. Virtual collaboration significantly affected employees' productivity in selected e-commerce firms in Lagos State, Nigeria”.

Okechuku and Nebo [20] assessed “the relationship between e-leadership and team productivity in e-business firms in Southeast, Nigeria. The specific objectives of the study were to examine the relationship between modern ICT adoption and team productivity and the relationship between virtual communication skill and team productivity in e-business firms in Southeast, Nigeria. Four selected e-business firms in Southeast, Nigeria were used for the study. Sample size of 213 employees from the four e-business firms was selected. Primary data was used for the study. Data were collected using questionnaire which was structured into four-point likert scale. The data collected were analyzed using Pearson's correlation and simple linear regression, at 5% probability level of significance. The findings revealed that there was a positive significant relationship between modern ICT adoption and team productivity, and there was a significant relationship between team communication skill and team productivity”.

2.9 Theoretical Review

The study was anchored on the Technology Acceptance Model (TAM) proposed by Davis [21]. TAM plays a fundamental role in explaining user behaviour when employees are introduced to new technology and systems. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are considered by Davis [21] to be key factors in explaining employee behaviour. Davis [21] defines PU as: “the degree to which a person believes that using a particular system would enhance his or her job performance” and PEOU as “the degree to which a person believes that using a particular system would be free of effort”. By drawing on this concept of PU and PEOU, Davis [21], suggests the constructs can be used by business practitioners to anticipate whether a new technology or system is likely to be accepted, and if it is not, then various interventions could be identified to enhance employee acceptance, like, user testing, training and greater education.

Thus the present study posits that if MTN Nigeria adopts and operationalized the principles of TAM in the implementation of their digitalization, training their employees and helping them

appreciate the usefulness digitalization and how seamlessly they can apply digital platforms in accomplishing their job requirements, it will enhance their employees' acceptance, and propel their performance. It will help the employees to appreciate the perceived usefulness of the digital based performance management and virtual management in the realization of MTN vision and mission and boost their contextual and adaptive performance towards the realization of the organisational mission and vision.

3. METHODOLOGY

The study made use of survey research design. The population of the study consisted of all MTN employees in Southeast Nigeria, which included MTN Nigeria employees from Abia State, Imo States, Anambra State, Enugu States and Ebonyi State. MTN Nigeria has a total of 616 employees across their different branches and offices that make up the Southeast Zone. The study sample size was calculated using Taro Yamane's formula and were computed to be 243 respondents. Bowley's proportional allocation formula was used to deduce the number of respondents that were sampled from MTN Nigeria offices in each of these states. The study made use of primary data, primary data was elicited through well-structured questionnaire entitled "Digitalization and Employees' Performance Questionnaire." The questionnaire was a closed ended type designed in five points Likert Scale (Strongly Agree = SA, Agreed = A, Disagreed = D, Strongly Disagreed = SD and Neutral = N). The close ended questionnaire had five options. The questionnaire was structured into two sections A and B, which captured the objectives and hypotheses of the study.

The study made use of random sampling techniques and purposive sampling techniques. Random sampling techniques were used in sampling the study respondents that are in major cities in Southeast Nigeria. The study made use of both online and face-to-face questionnaire administration. Through the database obtained by the researcher from MTN Nigeria Head Offices, which contained the MTN Nigeria employees' contacts and email addresses, the researcher purposively sent emails to the MTN Nigeria employees in the remote areas of Southeast Nigeria that were not covered by face-to-face questionnaire administration to obtain their consent to participate in the study and send

them the online link to visit and complete the survey online.

The study made use of Content validity and Face validity, while Cronbach Alpha reliability technique was used in testing the reliability of the study instrument. The decision rule was based on the coefficient of correlation that is up to 0.8 and above. The study made use of descriptive statistics and inferential statistics. Descriptive statistics such as mean and standard deviation were used to analyze the data obtained from the field work. Ordinary Least Square Regression analysis was used in testing the study hypotheses with the aid of Statistical Packages for Social Sciences (SPSS) version 23. Based on 243 questionnaire distributed in MTN Nigeria offices in the five (5) states in Southeast Nigeria, 212 questionnaire were returned, which represent 87.1% questionnaire return rate, while 200 valid questionnaire returned were used for the data analysis.

4. DATA ANALYSIS

Table 1 revealed that out of the 200 respondents, 80 respondents strongly agreed that MTN Southeast, Nigeria digital planning platform set goals and define individual success metrics in the organisation, 99 respondents agreed, 8 respondents disagreed, 2 respondents strongly disagreed, and 11 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.18 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 0.974, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria digital planning platform set goals and define individual success metrics in the organisation.

In the second item, out of the 200 respondents, 73 respondents strongly agreed that MTN Southeast, Nigeria digital monitoring platform actively track goals and provide feedback for employees in the organisation, 94 respondents agreed, 10 respondents disagreed, 5 respondents strongly disagreed and 18 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.99 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.152, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria digital monitoring platform actively track goals and provide feedback for employees in the organisation.

Table 1. Descriptive statistics analysis result on the respondents' opinion on digital based performance management in MTN Southeast, Nigeria

S/N	Items	SA	A	D	SD	U	M	Std. Dev.
1	Organisation digital planning platform set goals and define individual success metrics	80	99	08	02	11	4.18	0.974
2	Organisation digital monitoring platform actively track goals and provide feedback	73	94	10	05	18	3.99	1.152
3	Organisation digital training and development platform address poor performance	88	92	06	02	12	4.21	1.005
4	Organisation digital succession planning platform prepare employee to fill gaps	79	89	11	02	19	4.03	1.162
5	Organisation digital rating and rewarding platform track and rate performance	80	96	07	03	14	4.13	1.056
N							200	
Total Mean							20.54	
Grand Mean							4.11	
Beanchmark Mean							3.0	

Source: Field Survey 2024

Table 2. Descriptive statistics analysis result on the respondents' opinion on employees' contextual performance in MTN Southeast, Nigeria

S/N	Items	SA	A	D	SD	U	M	Std. Dev.
1	DBPM propel me to take up unassigned task to encourage the betterment of the organisation	74	82	13	07	24	3.88	1.284
2	DBPM encourage me to help others adapt with varied job roles in the organization	68	79	17	10	26	3.76	1.322
3	DBPM help me form allegiance with staff for the betterment of the organization	70	82	12	08	28	3.79	1.340
4	DBPM propel me to work with a sense of passion for the organization	65	83	19	11	22	3.79	1.262
5	DBPM propel me to abide by the rules and regulations, support organisational decisions	72	87	11	07	23	3.89	1.259
N							200	
Total Mean							19.11	
Grand Mean							3.82	
Beanchmark Mean							3.0	

Source: Field Survey 2024

In the third item, out of the 200 respondents, 88 respondents strongly agreed that MTN Southeast, Nigeria digital training and development platform address poor performance in the organisation, 92 respondents agreed, 6 respondents disagreed, 2 respondents strongly disagreed, 12 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.21 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.1005, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria

digital training and development platform address poor performance in the organisation.

In the fourth item, out of the 200 respondents, 79 respondents strongly agreed that MTN Southeast, Nigeria digital succession planning platform prepare employee to fill vacant gaps in the organisation, 89 respondents agreed, 11 respondents disagreed, 2 respondents strongly disagreed and 19 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.03 which is above the Benchmark Mean point of 3.0 and a Standard

Deviation value of 1.162, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria digital succession planning platform prepare employee to fill vacant gaps in the organisation.

In the fifth item, out of the 200 respondents, 80 respondents strongly agreed that MTN Southeast, Nigeria digital rating and rewarding platform track and rate employees' performance in the organisation, 96 respondents agreed, 7 respondents disagreed, 3 respondents strongly disagreed, and 14 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.13 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.056, which showed that more than the average number of the respondents agreed MTN Southeast, Nigeria digital rating and rewarding platform track and rate employees' performance in the organisation.

Therefore, Table 1 revealed that the model of digital based performance management in MTN Southeast, Nigeria adopted in the study is positive, as the model revealed a Grand Mean of 4.11 which is above the Benchmark Mean of 3.0. The respondents from MTN Southeast, Nigeria also revealed that digital based performance management are among the components of digital collaboration platform adopted in MTN Southeast, Nigeria.

Table 2 revealed that out of the 200 respondents, 74 respondents strongly agreed that MTN Southeast, Nigeria Digital Based Performance Management (DBPM) propel them to take up unassigned task to encourage the betterment of the organisation, 82 respondents agreed, 13 respondents disagreed, 7 respondents strongly disagreed, and 24 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.88 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.284, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria DBPM propel them to take up unassigned task to encourage the betterment of the organisation.

In the second item, out of the 200 respondents, 68 respondents strongly agreed that MTN Southeast Nigeria DBPM encourage them to help others adapt with varied job roles in the organisation, 79 respondents agreed, 17 respondents disagreed, 10 respondents strongly disagreed and 26 respondents were undecided.

There was no missing value. The responses gave a Mean value of 3.76 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.322, which showed that more than the average number of the respondents agreed that MTN Southeast DBPM encourage them to help others adapt with varied job roles in the organisation.

In the third item, out of the 200 respondents, 70 respondents strongly agreed that MTN Southeast, Nigeria DBPM help them to form allegiance with colleagues for the betterment of the organisation, 82 respondents agreed, 12 respondents disagreed, 8 respondents strongly disagreed, 28 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.79 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.340, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria DBPM help them to form allegiance with colleagues for the betterment of the organisation.

In the fourth item, out of the 200 respondents, 65 respondents strongly agreed that MTN Southeast, Nigeria DBPM propel them to work with a sense of passion for the organisation, 83 respondents agreed, 19 respondents disagreed, 11 respondents strongly disagreed and 22 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.79 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.262, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria DBPM propel them to work with a sense of passion for the organisation.

In the fifth item, out of the 200 respondents, 72 respondents strongly agreed that MTN Southeast, Nigeria DBPM propel them to abide by the rules and regulations, and support organisational decisions, 87 respondents agreed, 11 respondents disagreed, 7 respondents strongly disagreed, and 23 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.89 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.259, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria DBPM propel them to abide by the rules and regulations, and support organisational.

Table 3. Descriptive statistics analysis result on the respondents' opinion on virtual management in MTN Southeast, Nigeria

S/N	Items	SA	A	D	SD	U	M	Std. Dev.
1	Virtual management practice improves transparency, collaboration and results	82	96	03	01	18	4.12	1.117
2	Virtual management build trust and psychological safety to keep staff engaged	69	81	17	07	26	3.79	1.312
3	Virtual management ensured staff focus their energy in the right direction	61	73	24	11	31	3.61	1.377
4	Virtual management removed obstacles and provide tools for staff to perform	63	78	16	09	34	3.67	1.361
5	Virtual management set the standard for balance, healthy and sustainable approach to work	60	80	21	10	29	3.67	1.345
N							200	
Total Mean							18.86	
Grand Mean							3.77	
BeanchMark Mean							3.0	

Source: Field Survey 2024

Thus, Table 2 revealed that the model of employees' contextual performance in MTN Southeast, Nigeria adopted in the study is positive, as the model revealed a Grand Mean of 3.82 which is above the Benchmark Mean of 3.0. The respondents from MTN Southeast, Nigeria also revealed that DBPM help them to achieve their contextual performance in the organisation.

Table 3 revealed that out of the 200 respondents, 82 respondents strongly agreed that MTN Southeast, Nigeria virtual management practice improve transparency, collaboration and enhanced employees' results in the organisation, 96 respondents agreed, 3 respondents disagreed, 1 respondent strongly disagreed, and 18 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.12 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.117, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria virtual management practice improve transparency, collaboration and enhanced employees' results in the organisation.

In the second item, out of the 200 respondents, 69 respondents strongly agreed that MTN Southeast, Nigeria virtual management build trust and psychological safety to keep staff engaged in the organisation, 81 respondents agreed, 17 respondents disagreed, 7 respondents strongly disagreed and 26 respondents were undecided. There was no missing value. The responses gave a Mean

value of 3.79 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.312, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria virtual management build trust and psychological safety to keep staff engaged in the organisation.

In the third item, out of the 200 respondents, 61 respondents strongly agreed that MTN Southeast, Nigeria virtual management ensured staff focus their energy in the right direction in the organisation, 73 respondents agreed, 24 respondents disagreed, 11 respondents strongly disagreed, 31 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.61 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.377, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria virtual management ensured staff focus their energy in the right direction in the organisation.

In the fourth item, out of the 200 respondents, 63 respondents strongly agreed that MTN Southeast, Nigeria virtual management removed obstacles and provide tools for staff to perform their job in the organisation, 78 respondents agreed, 16 respondents disagreed, 9 respondents strongly disagreed and 34 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.67 which is above the Benchmark Mean point of 3.0 and a Standard Deviation

value of 1.361, which showed that more than the average number of the respondents agreed that MTN Southeast, Nigeria virtual management removed obstacles and provide tools for staff to perform their job in the organisation.

In the fifth item, out of the 200 respondents, 60 respondents strongly agreed that MTN Southeast, Nigeria virtual management set the standard for balance, healthy and sustainable approach to work in the organisation, 80 respondents agreed, 21 respondents disagreed, 10 respondents strongly disagreed, and 29 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.67 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.345, which showed that more than the average number of the respondents agreed MTN Southeast, Nigeria virtual management set the standard for balance, healthy and sustainable approach to work in the organisation.

Therefore, Table 3 revealed that the model of virtual management in MTN Southeast, Nigeria adopted in the study is positive, as the model revealed a Grand Mean of 3.77 which is above the Benchmark Mean of 3.0. The respondents from MTN Southeast, Nigeria also revealed that virtual management are among the components of digital collaboration platform adopted in MTN Southeast, Nigeria.

Table 4 revealed that out of the 200 respondents, 85 respondents strongly agreed that they adapt their attitude and behaviour to the varied requirements of their job roles in MTN Southeast, Nigeria, 91 respondents agreed, 3 respondents disagreed, 1 respondent strongly disagreed, and 20 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.10 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.176, which showed that more than the average number of the respondents agreed that they adapt their attitude and behaviour to the varied requirements of their job roles in MTN Southeast, Nigeria.

In the second item, out of the 200 respondents, 78 respondents strongly agreed that they efficiently deal with volatile work circumstances in MTN Southeast Nigeria, 93 respondents agreed, 7 respondents disagreed, 3 respondents strongly disagreed and 19 respondents were undecided. There was no missing value. The

responses gave a Mean value of 4.01 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.150, which showed that more than the average number of the respondents agreed that they efficiently deal with volatile work circumstances in MTN Southeast Nigeria.

In the third item, out of the 200 respondents, 74 respondents strongly agreed that they adapt when there is technological transformations or changes in job assignment in MTN Southeast, Nigeria, 97 respondents agreed, 2 respondents disagreed, 1 respondent strongly disagreed, 26 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.96 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.256, which showed that more than the average number of the respondents agreed that they adapt when there is technological transformations or changes in job assignment in MTN Southeast, Nigeria.

In the fourth item, out of the 200 respondents, 83 respondents strongly agreed that they find it easy to adapt when there is restructuring in MTN Southeast, Nigeria, 94 respondents agreed, 5 respondents disagreed, 1 respondent strongly disagreed, and 17 respondents were undecided. There was no missing value. The responses gave a Mean value of 4.13 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.102, which showed that more than the average number of the respondents agreed that they find it easy to adapt when there is restructuring in MTN Southeast, Nigeria.

In the fifth item, out of the 200 respondents, 64 respondents strongly agreed that they adjust their interpersonal behaviour in changed circumstance to work with colleagues in MTN Southeast, Nigeria, 88 respondents agreed, 20 respondents disagreed, 9 respondents strongly disagreed, and 19 respondents were undecided. There was no missing value. The responses gave a Mean value of 3.84 which is above the Benchmark Mean point of 3.0 and a Standard Deviation value of 1.199, which showed that more than the average number of the respondents agreed that they adjust their interpersonal behaviour in changed circumstance to work with colleagues in MTN Southeast, Nigeria.

Table 4. Descriptive statistics analysis result on the respondents’ opinion on employees’ adaptive performance in MTN Southeast, Nigeria

S/N	ITEMS	SA	A	D	SD	U	M	Std. Dev.
1	I adapt my attitude and behaviour to the varied requirements of my job roles	85	91	03	01	20	4.10	1.176
2	I efficiently deal with volatile work circumstances	78	93	07	03	19	4.01	1.150
3	I adapt when there is technological transformations or changes in job assignment	74	97	02	01	26	3.96	1.256
4	I find it easy to adapt when there is restructuring in the organisation	83	94	05	01	17	4.13	1.102
5	I adjust my interpersonal behaviour in changed circumstance to work with colleagues	64	88	20	09	19	3.84	1.199
N							200	
Total Mean							20.04	
Grand Mean							4.01	
Beanchmark Mean							3.0	

Source: Field Survey 2024

Table 5. Ordinary Least Regression analysis result on the effect of digital based performance management on employees’ contextual performance in MTN Southeast, Nigeria

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.180	0.066		32.782	0.000
Digital based performance management	0.700	0.024	0.904	29.698	0.000
R²	0.817				
R²	0.816				
F-Statistics	882.000				

a. Dependent Variable: Employees’ contextual performance

b. Predictor: Digital based performance management

c. Source: Field Survey 2024

Table 6. Ordinary Least Regression analysis result on the effect of virtual management on employees’ adaptive performance in MTN Southeast, Nigeria

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.106	0.072		29.127	0.000
Virtual management	0.709	0.024	0.903	29.541	0.000
R²	0.815				
R²	0.814				
F-Statistics	872.659				

a. Dependent Variable: Employees’ adaptive performance

b. Predictor: Virtual management

c. Source: Field Survey 2024

Thus, Table 4 revealed that the model of employees’ adaptive performance in MTN Southeast, Nigeria adopted in the study is positive, as the model revealed a Grand Mean of 4.01 which is above the Benchmark Mean of 3.0. The respondents from MTN Southeast, Nigeria also revealed that virtual management help them

to achieve their adaptive performance in the organisation.

4.1 Hypotheses Testing

Hypothesis one: Digital based performance management does not have any significant effect

on employees' contextual performance in MTN Southeast, Nigeria.

The result in Table 5 revealed the effect of digital based performance management on employees' contextual performance in MTN Southeast, Nigeria. The result revealed that digital based performance management with the regression coefficient of (0.904) is significant and positively affected employees' contextual performance in MTN Southeast, Nigeria at 1% level (Sig < .01) of significance. The result portrays that an increase in digital based performance management will lead to a positive increase in employees' contextual performance in MTN Southeast, Nigeria by 0.904. Therefore, at 1% level (Sig < .01) of significance, digital based performance management had a positive and significant effect on employees' contextual performance in MTN Southeast, Nigeria.

The R- square which shows the proportion of variation in the dependent variable that can be explained by the independent variables revealed that 81.7% of the total variation in employees' contextual performance in MTN Southeast, Nigeria was explained by the variation in digital based performance management. While the Adjusted R explains the effect of decrease in the degree of freedom arising from the independent variable. The F-statistics (882.000) is significant at 1% level, which shows the overall significance of the entire model. Therefore, the independent variables in the model were significant in explaining the change in the dependent variable.

Based on the above results in Table 5, which revealed that at 1% level (Sig < .01) of significance, digital based performance management had a positive and significant effect on employees' contextual performance in MTN Southeast, Nigeria., the researcher rejected the null hypothesis which states: "Digital based performance management does not have any significant effect on employees' contextual performance in MTN Southeast, Nigeria" and accepted the alternate hypothesis which states: "Digital based performance management had a significant effect on employees' contextual performance in MTN Southeast, Nigeria."

Hypothesis two: Virtual management have no significant effect on employees adaptive' performance in MTN Southeast, Nigeria.

The result in Table 6 revealed the effect of effect of virtual management on employees' adaptive

performance in MTN Southeast, Nigeria. The result revealed that virtual management with the regression coefficient of (0.903) is significant and positively affected employees' adaptive performance in MTN Southeast, Nigeria at 1% level (Sig < .01) of significance. The result portrays that an increase in virtual management will lead to a positive increase in employees' adaptive performance in MTN Southeast, Nigeria by 0.903. Therefore, at 1% level (Sig < .01) of significance, virtual management had a positive and significant effect on employees' adaptive performance in MTN Southeast, Nigeria.

The R- square which shows the proportion of variation in the dependent variable that can be explained by the independent variables revealed that 81.5% of the total variation in employees' adaptive performance in MTN Southeast, Nigeria was explained by the variation in virtual management. While the Adjusted R explains the effect of decrease in the degree of freedom arising from the independent variable. The F-statistics (872.659) is significant at 1% level, which shows the overall significance of the entire model. Therefore, the independent variables in the model were significant in explaining the change in the dependent variable.

Based on the above results in Table 6, which revealed that at 1% level (Sig < .01) of significance, virtual management had a positive and significant effect on employees' adaptive performance in MTN Southeast, Nigeria., the researcher rejected the null hypothesis which states: "Virtual management have no significant effect on employees adaptive' performance in MTN Southeast, Nigeria" and accepted the alternate hypothesis which states: "Virtual management had a significant effect on employees adaptive' performance in MTN Southeast, Nigeria."

5. DISCUSSION

The results in Table 5, revealed that: At 1% level (Sig < .01) of significance, digital based performance management had a positive and significant effect on employees' contextual performance in MTN Southeast, Nigeria. This implied that MTN digital based performance management improved employees' contextual performance. Therefore, the enhancement of MTN digital based performance management will continue to boost employees' performance.

The result agrees with the findings of Hamied, Farida, Muhammad and Uning [18], Putu, Ni and

Ni [19]. Hamied, et al., [18], analyzed the direct and indirect effects of the implementation of electronic performance management on key performance indicators, through mediation of employee job satisfaction and work engagement scale for employees at PT Pelindo I, and revealed job satisfaction has a positive and significant effect on key performance indicators and job engagement has a positive and significant effect on key performance indicators. Putu, et al. [19], focused on digital-based performance management concept within an effort to improve employee performance BUMDes during the Covid-19 Pandemic and revealed that the concept of work management influences digitalization and employee performance, by increasing employee performance.

The results in Table 6, revealed that: At 1% level (Sig < .01) of significance, virtual management had a positive and significant effect on employees' adaptive performance in MTN Southeast, Nigeria. This signified that MTN virtual management enhanced their employees' adaptive performance. Thus, improving the effectiveness of virtual management in the organization will continue to enhance employees' performance in the organization.

The result is in tandem with the findings of Okechukwu, et al., [16], Okechuku and Nebo [20], Okechukwu, et al., [16], examined the effect of virtual management on employee performance in selected e-business in Lagos State, Nigeria and revealed that Virtual communication had a significant positive effect on employees' effectiveness and employees' productivity in selected e-commerce firms in Lagos state, Nigeria. Okechuku and Nebo [20] assessed the relationship between e-leadership and team productivity in e-business firms in Southeast, Nigeria and revealed that there was a positive significant relationship between modern ICT adoption and team productivity and there was a significant relationship between team communication skill and team productivity [22-24].

6. CONCLUSION

Based on the study findings the study concluded that digitalization had a positive and significant effect on employee's performance in MTN Southeast, Nigeria. This inference drawn is in tandem with tenets of Technology Acceptance Model which anchored the study.

7. RECOMMENDATIONS

Based on the study findings, the following recommendations were deemed imperative:

- i. The management of MTN Southeast, Nigeria needs to uphold their Digital Based Performance Management (DBPM) as it significantly affects employees' contextual performance. However, they need to implement DBPM that enables real-time feedback and leverage on performance analytics within the digital system to evaluate contextual performance trends. They also need to involve employees in the goal setting and performance evaluation processes through the digital platform. This will empower individuals to take ownership of their contextual performance and fosters a sense of accountability. Additionally, management need to ensure that the DBPM platform has a user-friendly interface, a seamless and intuitive experience to encourages active engagement, making it easier for employees to utilize the system for self-assessment and improvement.
- ii. The management of MTN Southeast, Nigeria needs to sustain their virtual management as it significantly affects employees' adaptive performance. However, to ensure effectiveness, they need to establish transparent communication channels to ensure that virtual teams are well-informed, to reduce ambiguity and enhance adaptive performance as employees understand their roles and expectations. They need to schedule regular virtual meetings to discuss progress, challenges, and provide constructive feedback, to facilitate a sense of connection, keeps everyone aligned, and enables quick adaptation to changes. Also, they need to promote virtual collaboration tools to facilitate teamwork and idea-sharing.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

CONSENT

As per international standards or university standards, Participants' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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