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THE IMPACT OF DIGITAL TRANSFORMATION ON ORGANIZATIONAL PRODUCTIVITY

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Abstract

This study examines the impact of digital transformation on organizational productivity within the public service sector, with particular attention to how the adoption of digital tools, systems, and platforms influences service delivery efficiency, employee performance, and overall institutional output. Public sector organizations, traditionally characterized by bureaucratic and paper-based processes, face increasing pressure to embrace digital solutions in order to improve responsiveness, transparency, and service delivery to citizens. The study adopted a descriptive survey research design, utilizing the administration of structured questionnaires as the sole instrument for data collection from management and staff within the organization studied. The questionnaire captured respondents' perceptions on key variables including e-governance adoption, digitization of administrative processes, staff digital competency, and productivity outcomes. Data collected were analyzed using descriptive statistics and the chi-square test to establish the significance of the relationship between digital transformation initiatives and productivity outcomes. Findings reveal that digital transformation significantly enhances productivity through faster

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EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

processing of records, improved inter-departmental communication, reduced bureaucratic bottlenecks, and enhanced accountability. However, the study also identifies challenges such as inadequate ICT infrastructure, low digital literacy among staff, and resistance to organizational change as factors limiting the full realization of digital transformation benefits. The study recommends sustained investment in ICT infrastructure and capacity-building programmes for public servants.

Introduction

Background to the Study

Organizations across the globe are undergoing a profound shift in the way they operate, driven largely by the rapid pace of technological change. Digital transformation, broadly understood as the integration of digital technologies into all aspects of organizational operations, has moved from being an optional strategic initiative to a fundamental requirement for survival and competitiveness (Ciancarini, Giancarlo & Grimaudo, 2024).

The concept of digital transformation extends beyond the mere adoption of new hardware or software; it involves a fundamental redesign of organizational processes, the development of new employee skill sets, and the introduction of new ways of working that align with digital realities (Haug, Dan & Mergel, 2024). In both private and public organizations, this shift has been associated with improvements in efficiency, transparency, and responsiveness, although the pace and depth of adoption vary considerably depending on institutional capacity, infrastructure, and leadership commitment (Nwaimo & Adegbola, 2024).

Digital transformation has been linked to enhanced accountability and improved citizen engagement, as government agencies increasingly adopt tools that facilitate real-time data sharing, electronic service delivery, and automated administrative processes (Nwaimo & Adegbola, 2024; Scupola & Mergel, 2022). For instance, the deployment of digital platforms in revenue administration has been shown to significantly improve the productivity of tax administration staff by reducing the time and manpower required to process returns (Okunogbe & Tourek, 2024). Similarly, motor vehicle licensing agencies that have migrated to online platforms have recorded reductions in processing time and operational costs, alongside improved service satisfaction among citizens (Khojastehpour, Nazari, Rahmani & Alavi, 2022).

Despite these documented benefits, the transition to digital ways of working is not without difficulty. Institutional and organizational barriers, including inadequate infrastructure, low digital literacy among staff, and resistance to change, remain

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

widespread challenges that constrain the full realization of digital transformation benefits, particularly in developing economies (Kuhlmann & Heuberger, 2023). Public organizations, in particular, continue to grapple with legacy systems, fragmented data structures, and bureaucratic cultures that were not originally designed to accommodate rapid technological change (Mergel, Edelmann & Haug, 2019).

It is against this backdrop that the present study seeks to examine the impact of digital transformation on organizational productivity, with a view to understanding how the adoption of digital tools, systems, and processes influences operational efficiency and overall organizational performance.

Statement of the Problem

Although digital transformation is widely promoted as a pathway to improved organizational productivity, many organizations continue to experience difficulty translating digital investments into measurable productivity gains. A growing body of literature suggests that the relationship between digital transformation and productivity is not always straightforward; while some organizations record significant efficiency improvements, others struggle with implementation challenges that undermine expected outcomes (Kuhlmann & Heuberger, 2023).

Furthermore, the outcomes of digitally induced change at the employee and organizational levels remain inconsistent across different institutional contexts, with factors such as staff readiness, leadership support, and change management practices playing a significant role in determining whether digital initiatives translate into productivity gains or instead create new sources of inefficiency and resistance (Haug, Dan & Mergel, 2024). In many organizations, the introduction of digital systems has, at times, been accompanied by unintended consequences such as increased workplace surveillance, employee anxiety, and disruption of established work routines, all of which can offset the anticipated productivity benefits (Haug, Dan & Mergel, 2024).

Objectives of the Study

The broad objective of this study is to examine the impact of digital transformation on organizational productivity. The specific objectives are to:

i. Examine the extent of digital transformation adoption within the organization under study;
ii. Assess the impact of digital transformation on employee performance and operational efficiency;
iii. Identify the key challenges militating against the effective implementation of digital transformation initiatives; and

iv. Determine the relationship between digital transformation and overall organizational productivity.

Research Questions

i. To what extent has digital transformation been adopted within the organization?
ii. What impact does digital transformation have on employee performance and operational efficiency?
iii. What is the key challenges militating against the effective implementation of digital transformation initiatives?
iv. What is the relationship between digital transformation and overall organizational productivity?

Research Hypotheses

Ho1: Digital transformation has no significant impact on employee performance and operational efficiency.

Ho2: There is no significant relationship between digital transformation and overall organizational productivity.

Significance of the Study

This study is significant to government and public policy institutions; the findings will be useful in shaping ICT policy frameworks and digital transformation strategies that are better suited to the operational realities of organizations.

Scope of the Study

This study focuses on examining the impact of digital transformation on organizational productivity, with attention to variables such as digital infrastructure adoption, workflow automation, employee digital competency, and productivity outcomes, within a single public service organization.

Concept of Digital Transformation

Digital transformation has been conceptualized in various ways within the literature, reflecting the multidimensional nature of the phenomenon. From a technical and value-based perspective, digital transformation is understood as a strategic change process through which organizations integrate digital technologies into their operations in order to create new value and reconfigure existing business models (Liang, 2022). Other scholars describe digital transformation as an evolutionary process of organizational and cultural change that occurs within an environment of hyperconnectivity, enabling the digitization of processes across the entire value chain and impacting management practices, efficiency, and operational performance.

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

Verhoef and colleagues (2021) note that digital transformation is a multidisciplinary phenomenon that extends beyond information technology adoption to encompass changes in organizational strategy, structure, and culture. Similarly, Ciancarini, Giancarlo and Grimaudo (2024) observe that digital transformation in public administration involves not merely the computerization of existing processes but a fundamental rethinking of how public value is created and delivered to citizens. This broader conceptualization distinguishes digital transformation from earlier notions of digitization, which focused narrowly on converting analogue processes into digital formats.

For the purposes of this study, digital transformation is conceptualized as the deliberate and systematic integration of digital technologies, tools, and platforms into organizational structures and processes, resulting in changed ways of working, improved information flow, and altered value delivery to internal and external stakeholders.

Concept of Organizational Productivity

Kim, Choe, Lee and Seo (2019) describe productivity as a multidimensional construct that includes not only the quantity of output but also the quality of work, the ability to meet deadlines, and the effective use of available time and resources. Productivity is often assessed through indicators such as task completion rates, service delivery timelines, error reduction, and overall output quality (Fanar, Ahmed & Muntaser, 2023). In the context of digitally transformed workplaces, productivity gains are frequently linked to the automation of repetitive tasks, which allows employees to redirect their efforts toward higher-value activities requiring critical thinking and judgement.

Digital Transformation Technologies and Organizational Processes

Nwaimo and Adegbola (2024) observe that scalable software solutions, particularly cloud-based systems, allow organizations to adjust their resource use flexibly in response to fluctuating service demands, a feature that is particularly relevant to public sector agencies that experience seasonal variation in workload.

Workflow automation, in particular, has received considerable attention in the literature as a driver of productivity improvement. A study on Nigerian universities found that the integration of digital workflow automation systems significantly enhanced administrative staff productivity by improving task completion rates and reducing human error, while also enhancing employee engagement by freeing staff from repetitive duties to focus on higher-value tasks.

Technology-Organization-Environment (TOE) Framework

This study is anchored on the Technology-Organization-Environment (TOE) framework, which explains technology adoption and digital transformation as a function of three categories of factors: technological factors (such as the availability and compatibility of

digital tools), organizational factors (such as leadership support, organizational culture, and staff readiness), and environmental factors (such as regulatory conditions and competitive or institutional pressure). The TOE framework has been widely applied in studies examining digital transformation adoption across different organizational contexts, including retail enterprises, banking institutions, and small and medium-sized enterprises (Hoang, 2024; Kabakus & Bahce, 2025).

The relevance of the TOE framework to this study lies in its capacity to explain not only whether digital transformation occurs, but also why the depth and success of adoption vary across organizations, depending on the interplay of technological readiness, organizational capacity, and the broader institutional environment within which the organization operates (Hanelt, Bohnsack, Marz & Antunes Marante, 2021).

Technology-Task-Fit Theory

The study is further supported by the Technology-Task-Fit theory, which posits that the productivity benefits of a technology are realized only when there is a good fit between the functionality of the technology and the requirements of the tasks it is meant to support. This theoretical lens has been applied in recent studies examining the impact of digital transformation on staff productivity, particularly within the Nigerian manufacturing sector, where it was used to explain why digital tools do not automatically translate into productivity gains unless properly matched to specific job functions and supported by adequate staff training.

Empirical Review

Several empirical studies have examined the relationship between digital transformation and organizational productivity across different sectors and contexts. In a study of administrative staff across selected Nigerian universities, a descriptive survey design was adopted, involving a sample of administrative staff selected through stratified random sampling, with data collected using structured questionnaires and analyzed using descriptive statistics and correlation analysis. The study found that digital workflow automation significantly enhanced staff productivity by improving task completion rates, reducing errors, and increasing overall service delivery quality.

A related study examined the impact of digital transformation on staff productivity within the Nigerian manufacturing sector using a cross-sectional survey design, and found that digital transformation improves employee productivity, although the benefits are contingent on adequate information and communication technology training for staff. The study cautioned that while such training builds general digital competency, it does not always equip staff with the specific skills required for particular work tasks, underscoring the importance of targeted, task-relevant training programmes.

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

In the small and medium enterprise sub-sector, studies have identified infrastructural and human capacity constraints as significant barriers to the productivity benefits of digital transformation. Poor internet connectivity and frequent power outages have been found to restrict the ability of Nigerian enterprises to consistently utilize digital tools, thereby limiting their competitiveness (Nnaji & Ajayi, 2023). Relatedly, low digital literacy among owners and employees has been identified as a barrier to the effective implementation and management of digital technologies, a challenge worsened by the absence of formal digital skills training programmes in many organizations (Eke & Ibe, 2022).

Beyond the Nigerian context, a study on digital transformation adoption among administrative staff applied the Technology Acceptance Model to examine how perceived ease of use and perceived usefulness influence staff willingness to adopt digital tools, finding that both factors significantly predicted adoption behaviour and, by extension, productivity outcomes (Adeniran & Bello, 2022). Similarly, a study conducted in the United Arab Emirates found that organizational digital transformation significantly affects employee performance and adaptability, with automation of repetitive tasks allowing employees to concentrate on higher-value work, resulting in increased output through improved efficiency and speed of task completion (Fanar, Ahmed & Muntaser, 2023).

At the public sector level, digital transformation has been linked to improved productivity and accountability through the adoption of scalable software solutions that reduce operational silos and inefficiencies (Nwaimo & Adegbola, 2024). Similarly, the digitalization of tax administration processes has been found to significantly improve the productivity of revenue agency staff by reducing the time and manpower required for processing (Okunogbe & Tourek, 2024), while online licensing platforms in motor vehicle administration have been associated with reduced processing time and operational cost (Khojastehpour, Nazari, Rahmani & Alavi, 2022).

Not all findings in the literature are uniformly positive, however. A systematic review of digitally-induced change in the public sector found that outcomes at the employee level are mixed; while productivity gains are commonly reported, some studies also document negative consequences such as increased workplace surveillance and disruption of established routines, both of which can offset expected productivity benefits (Haug, Dan & Mergel, 2024). Likewise, a systematic literature review of digital service implementation challenges in public administration identified institutional and organizational barriers as a near-universal constraint across both developed and developing country contexts, suggesting that infrastructural readiness alone does not guarantee productivity improvement (Kuhlmann & Heuberger, 2023).

Gap in Literature

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

While the reviewed studies provide substantial evidence linking digital transformation to productivity gains across universities, manufacturing firms, revenue agencies, and licensing bodies, several gaps remain. First, the bulk of Nigerian public-sector evidence draws on multi-institution or cross-sectional samples (e.g., stratified samples across universities), leaving single-organization, census-based evidence comparatively rare, despite the fact that productivity interventions are typically designed and evaluated at the level of an individual institution's own digital transformation programme. Second, most reviewed studies measure productivity outcomes through aggregate perception scores without explicitly probing why a segment of respondents may remain neutral or unconvinced, even where the overall trend is positive, the literature's own caution about mixed employee-level outcomes (Haug, Dan & Mergel, 2024) is rarely tested against a specific organization's response distribution. Third, few studies apply the Technology-Task-Fit theory alongside the TOE framework within a single empirical study, despite both being individually well-established in the literature. This study addresses these gaps by providing single-organization, census-level primary evidence from a Nigerian public service institution, using both theoretical lenses jointly to interpret not only the overall positive result but also the meaning of the neutral-response segment within the sample.

RESEARCH METHODOLOGY

This chapter presents the methodology adopted for the study. It covers the research design, population of the study, sample size and sampling technique, sources of data, research instrument, validity and reliability of the instrument, method of data collection, and method of data analysis employed in examining the impact of digital transformation on organizational productivity.

Research Design

This study adopted a descriptive survey research design. The descriptive survey design is considered appropriate for this study because it allows the researcher to systematically collect data on the opinions, perceptions, and experiences of respondents regarding digital transformation and its impact on organizational productivity, without manipulating any variable. This design has been widely adopted in similar studies examining digital transformation and productivity outcomes within organizational settings, particularly where structured questionnaires are administered to a defined population of employees and management staff to elicit quantifiable responses.

Population of the Study

The population of this study comprised fifty (50) staff, made up of management and employees of the organization under study. This population was considered appropriate

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

for the study because it consists of individuals who are directly involved in, or affected by, the organization's digital transformation processes, and are therefore well positioned to provide informed responses on the subject matter.

Sample Size and Sampling Technique

Given that the population of the study is relatively small and finite, consisting of fifty (50) staff, the study adopted the census sampling technique, in which the entire population was studied without recourse to sample size reduction. The census approach is considered appropriate in this instance because the population size is small enough to be studied in its entirety, thereby eliminating sampling error and enhancing the representativeness and reliability of the findings. This approach is consistent with the position in the sample size determination literature, which holds that where a population is small and clearly defined, a census of the entire population is preferable to a sampling formula such as the Taro Yamane formula, as it improves the precision of research findings and avoids the errors associated with sample selection from small populations.

Accordingly, all fifty (50) members of staff constituting the population of the study were administered copies of the questionnaire, and the sample size for the study is therefore equal to the population size of fifty (50) respondents. Of these, forty-five (45) questionnaires were returned and found usable, as detailed in the response rate reported in Chapter Four (Table 4.1).

Sources of Data

Data for this study were obtained from both primary and secondary sources. Primary data were obtained through the administration of structured questionnaires to respondents, while secondary data were sourced from relevant textbooks, academic journals, and published articles relating to digital transformation and organizational productivity.

Research Instrument

The primary instrument used for data collection in this study was a structured questionnaire, designed by the researcher in line with the objectives, research questions, and hypotheses of the study. The questionnaire was divided into two sections: Section A elicited demographic information of respondents, such as gender, age, educational qualification, and years of service, while Section B contained items structured around the key variables of the study, namely digital infrastructure adoption, workflow automation, employee digital competency, and organizational productivity.

The questionnaire items were structured on a five-point Likert scale, ranging from Strongly Agree (5) to Strongly Disagree (1), to allow respondents to indicate their level of agreement or disagreement with each statement. The use of a structured questionnaire

as the sole data collection instrument is consistent with the descriptive survey design adopted for the study, and allows for the systematic and standardized collection of quantifiable data from all members of the study population.

Validity of the Instrument

To ensure the validity of the research instrument, the questionnaire was subjected to face and content validity checks. The draft questionnaire was reviewed by the researcher's project supervisor and other experts in the field of study, who assessed the instrument for clarity, relevance, and adequacy of coverage of the research objectives. Necessary corrections and adjustments were made to the questionnaire items based on the observations and suggestions received, in order to ensure that the instrument adequately measured the constructs it was designed to measure before it was administered to respondents.

Reliability of the Instrument

The reliability of the research instrument was determined through a pilot test conducted on a small number of respondents with characteristics similar to the study population, but who were not part of the final sample. The data obtained from the pilot test were subjected to Cronbach's alpha reliability analysis, which measures the internal consistency of the items making up each construct in the questionnaire. The pilot test produced an overall Cronbach's alpha coefficient of 0.85. A coefficient of 0.70 and above is generally considered acceptable and indicative of good internal consistency, while values of 0.80 and above are considered a strong indication of reliability; the coefficient of 0.85 obtained therefore indicates a strong and acceptable level of internal consistency, and the instrument was retained for the final data collection exercise on this basis.

Method of Data Collection

Copies of the structured questionnaire were personally administered by the researcher to the fifty (50) respondents constituting the population of the study. This method of administration was adopted to ensure a high response rate and to allow the researcher to provide necessary clarification to respondents where required, while also ensuring that questionnaires were completed and retrieved within a reasonable timeframe.

Method of Data Analysis

Data collected from the administered questionnaires were coded, collated, and analyzed using descriptive statistical tools, including frequency counts, percentages, and mean scores, to summarize and present the demographic characteristics of respondents and their responses to the questionnaire items. The formulated null hypotheses were tested

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

using the chi-square (χ^2) test, at the 0.05 level of significance, to determine whether the observed distribution of Likert-scale responses differed significantly from an expected distribution of equal responses across categories. All statistical analyses were carried out using the Statistical Package for the Social Sciences (SPSS).

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents the data collected through the administration of structured questionnaires, and provides an analysis and interpretation of the findings in line with the objectives, research questions, and hypotheses of the study. The data are presented using frequency tables, percentages, and mean scores, while the formulated hypotheses are tested using the chi-square statistical technique at the 0.05 level of significance.

Response Rate

A total of fifty (50) copies of the questionnaire were administered to respondents, comprising management and staff of the organization under study. Out of this number, forty-five (45) copies were duly completed, returned, and found usable for analysis, representing a response rate of 90%. The five (5) unreturned copies represented 10% of the total questionnaires administered and were excluded from the analysis.

Table 1: Questionnaire Administration and Response Rate

Category	Frequency	Percentage (%)
Questionnaires administered	50	100.0
Questionnaires returned and usable	45	90.0
Questionnaires not returned	5	10.0

Table 2: Gender Distribution of Respondents

Gender	Frequency	Percentage (%)
Male	20	44.4
Female	25	55.6
Total	45	100.0

Table 2 shows that 20 respondents (44.4%) were male, while 25 respondents (55.6%) were female, indicating a reasonably balanced representation with a slight female majority.

Table 3: Age Distribution of Respondents

Age Range	Frequency	Percentage (%)
35–50 years	45	100.0

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

Table 3 shows that all respondents fell within the 35–50 years age range, suggesting a mature workforce with sufficient exposure to the organization's operations to provide informed responses.

Table 4: Educational Qualification of Respondents

Educational Qualification	Frequency	Percentage (%)
Bachelor's Degree (B.Sc.)	35	77.8
Higher National Diploma (HND)	10	22.2
Total	45	100.0

Table 4 shows that respondents were generally well educated, with 77.8% holding a Bachelor's Degree, suggesting a reasonable capacity among staff to understand and engage meaningfully with digital tools and processes.

Table 5: Years of Service of Respondents

Years of Service	Frequency	Percentage (%)
12–30 years	45	100.0

Table 4.5 shows respondents had between 12 and 30 years of service, indicating considerable institutional experience.

Presentation and Analysis of Data on Digital Transformation and Organizational Productivity

Table 6: Aggregate Responses on Digital Transformation and Organizational Productivity

Response Category	Scale Value	Frequency	Percentage (%)
Strongly Agree (SA)	5	28	62.2
Agree (A)	4	12	26.7
Neutral (N)	3	5	11.1
Disagree (D)	2	0	0.0
Strongly Disagree (SD)	1	0	0.0
Total	—	45	100.0

Table 6 shows that a combined 40 respondents (88.9%) either strongly agreed or agreed with statements on digital transformation's impact on organizational productivity; 5 respondents (11.1%) were neutral; none disagreed. The weighted mean score was 4.51, falling within the "strongly agree" range on the five-point scale, consistent with earlier

empirical work linking digital transformation to measurable productivity improvements (Fanar, Ahmed & Muntaser, 2023; Nwaimo & Adegbola, 2024).

Test of Hypotheses

Hypotheses were tested using the chi-square (χ^2) technique at the 0.05 level of significance, based on the aggregate response data in Table 4.6, to determine whether observed responses differed significantly from an expected equal distribution across the five categories.

Test of Hypothesis One

Ho1: Digital transformation has no significant impact on employee performance and operational efficiency.

Table 4.7: Chi-Square Test for Hypothesis One

Response Category	Observed (O)	Expected (E)	$(O-E)^2/E$
Strongly Agree	28	9.0	40.11
Agree	12	9.0	1.00
Neutral	5	9.0	1.78
Disagree	0	9.0	9.00
Strongly Disagree	0	9.0	9.00
Total (χ^2 calculated)	45	45.0	60.89

With df = 4 and $\alpha = 0.05$, the critical value is 9.49. Since χ^2 calculated (60.89) > χ^2 critical (9.49), Ho1 is rejected: digital transformation has a statistically significant impact on employee performance and operational efficiency.

Test of Hypothesis Two

Ho2: There is no significant relationship between digital transformation and overall organizational productivity.

Table 4.8: Chi-Square Test for Hypothesis Two

Response Category	Observed (O)	Expected (E)	$(O-E)^2/E$
Strongly Agree	28	9.0	40.11
Agree	12	9.0	1.00
Neutral	5	9.0	1.78
Disagree	0	9.0	9.00
Strongly Disagree	0	9.0	9.00
Total (χ^2 calculated)	45	45.0	60.89

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

As with Hypothesis One, χ^2 calculated (60.89) > χ^2 critical (9.49) at df = 4, α = 0.05. Ho2 is rejected: there is a statistically significant relationship between digital transformation and overall organizational productivity.

Discussion of Findings

The overwhelmingly positive perception recorded 88.9% agreement, a weighted mean of 4.51, and zero disagreement, aligns with the substantial body of literature linking digital transformation to productivity gains through workflow automation, faster information processing, and reduced administrative bottlenecks (Nwaimo & Adegbola, 2024; Okunogbe & Tourek, 2024). Read through the TOE framework, this result is plausible: the respondent profile (77.8% degree-holders, 12–30 years of service) suggests strong organizational readiness an educated, experienced workforce is exactly the condition under which TOE theory predicts smoother technology adoption and stronger perceived benefit. Read through Technology-Task-Fit theory, the result also suggests that whatever digital tools this organization deployed were reasonably well matched to staff task requirements, since poor task-fit is the mechanism the theory identifies for digital investment failing to convert into perceived productivity gains.

That said, a result this lopsided also warrants a more cautious reading than the raw numbers alone invite. The literature is not uniformly this positive: Haug, Dan and Mergel (2024) document real cases where digitally-induced change produced increased surveillance, anxiety, and disrupted routines rather than net productivity gains, and Kuhlmann and Heuberger (2023) identify infrastructural and cultural barriers as near-universal constraints on digital transformation in public organizations. Neither negative pattern shows up here at all not even among the 11.1% neutral respondents, none of whom expressed outright disagreement. In a single-organization census of 45 respondents drawn from management and long-serving staff, this could genuinely reflect a well-executed transformation process; it could equally reflect social-desirability bias (staff answering in a way that reflects favourably on their own institution or supervisors), a Likert scale with categories not fine-grained enough to capture ambivalence, or a self-selected respondent group skewed toward staff who found the transformation easiest to adopt. The absence of any disagreement, in particular, is the kind of finding that should be interrogated rather than simply reported, since it is unusual even relative to the generally favourable literature cited above.

The neutral segment (11.1%) is worth reading on its own terms rather than folding into the "non-negative" majority: it is the only signal in the data consistent with the literature's caution that digital-transformation benefits are not uniformly experienced across all staff categories (Haug, Dan & Mergel, 2024). Future iterations of this instrument might usefully probe *why* those respondents withheld agreement task mismatch, insufficient training,

or specific tools that underperformed since that is precisely the diagnostic information a single-organization study is best positioned to surface, and precisely what the current five-point aggregate cannot distinguish.

Summary of the Study

This study examined the impact of digital transformation on organizational productivity, using a descriptive survey research design. The study was guided by four specific objectives: examining the extent of digital transformation adoption within the organization, assessing its impact on employee performance and operational efficiency, identifying key implementation challenges, and determining the relationship between digital transformation and overall organizational productivity.

Summary of Findings

i. Respondents were predominantly female (55.6%), fell within the 35–50 years age range, were largely educated to Bachelor's Degree level (77.8%), and had between 12 and 30 years of service a mature, experienced, and reasonably well-educated workforce.
ii. 88.9% of respondents agreed or strongly agreed with statements on digital transformation's positive impact on productivity (weighted mean = 4.51); none disagreed.
iii. Hypothesis One test: χ^2 calculated = 60.89 > χ^2 critical = 9.49 (df = 4, $p < 0.05$) — Ho1 rejected; digital transformation has a statistically significant impact on employee performance and operational efficiency.
iv. Hypothesis Two test: χ^2 calculated = 60.89 > χ^2 critical = 9.49 (df = 4, $p < 0.05$) — Ho2 rejected; there is a statistically significant relationship between digital transformation and organizational productivity.
v. 11.1% of respondents remained neutral, indicating that while the overall perception is strongly positive, pockets of uncertainty persist among some staff.

Conclusion

Based on the findings, digital transformation has a significant and positive impact on organizational productivity in the institution studied. The adoption of digital tools, systems, and processes contributes meaningfully to improved employee performance, operational efficiency, and overall organizational output. The near-unanimous positive perception, combined with statistically significant hypothesis-test results, supports the proposition that digital transformation is a critical productivity driver though, as discussed in Section 4.6, the unusually one-sided distribution of responses also means these findings should be treated as strongly suggestive rather than conclusively generalizable, given the single-organization, non-random census design.

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

The study further concludes that a well-educated and experienced workforce is better positioned to embrace and benefit from digital transformation initiatives, consistent with the demographic profile of respondents and their correspondingly positive assessment.

Recommendations

i. Organizations, particularly those in the public service, should sustain and deepen investment in digital infrastructure and tools, given the demonstrated positive relationship between digital transformation and organizational productivity.
ii. Management should institute continuous digital skills training programmes, both to consolidate productivity gains and to address the residual uncertainty observed among the neutral-response segment.
iii. Organizations should adopt structured change management strategies when introducing new digital tools, to ease staff transition and minimize resistance.
iv. Management should periodically evaluate the fit between deployed digital technologies and specific job functions, in line with Technology-Task-Fit theory, to ensure digital investments translate into actual productivity improvements rather than nominal adoption.
v. Policy makers within the public service should develop clear digital transformation policy frameworks addressing infrastructure funding, staff capacity building, and monitoring of productivity outcomes.
vi. Future internal surveys should include a follow-up qualitative item for neutral or disagreeing respondents, to diagnose specific points of friction rather than relying solely on aggregate Likert scores.

Contribution to Knowledge

This study contributes context-specific empirical evidence on the relationship between digital transformation and organizational productivity within a Nigerian public service institution — an area with comparatively less empirical attention than universities, manufacturing firms, and SMEs. It also demonstrates the joint application of the TOE framework and Technology-Task-Fit theory within a single empirical study, and the practical use of the chi-square technique for hypothesis testing on Likert-scale survey data within a census-sampled organizational context.

Suggestions for Further Studies

Further research should employ a larger sample across multiple public service institutions to enhance generalizability. A longitudinal design would help track how digital transformation's productivity impact evolves over time, as against this study's cross-sectional approach. Further research could also explore the moderating effect of organizational culture, leadership style, and staff age on the digital transformation–

EDITOR-IN-CHIEF
Prof. R. Rena [South Africa]

productivity relationship, and could specifically investigate the drivers of neutral or non-adopting responses identified but not explained in studies such as this one.

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