

IMPACT OF ROBOTIC PROCESS AUTOMATION, RPA ON FILE PROCESSING AND RED TAPE REDUCTION IN NIGERIAN FEDERAL MDA's. A STUDY OF THE OFFICE OF THE HEAD OF CIVIL SERVICE OF THE FEDERATION.

BY

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Abstract

Nigeria has faced several challenges such as bureaucratic inefficiency, manual file processing, administrative red tape, limited automation, and poor service delivery, which has undermined citizen trust and hindered economic development (PEBEC, 2025). The Federal Government initiated the deployment of Robotic Process Automation (RPA), the migration to the 1Gov Cloud Enterprise Content Management System (ECMS), workflow orchestration, automated task routing, and digital literacy training programmes across Ministries, Departments, and Agencies to address these challenges. The target population are management staff, middle-level officers, and junior staff in the Office of the Head of Civil Service of the Federation, Abuja. The total population of the study is approximately 3,650 staff. A sample size of 348 respondents was determined using the Krejcie and Morgan (1970) determination formula. Primary data were sourced from structured questionnaires administered to 348 sampled staff and semi-structured interviews conducted with 10 key informants, while secondary data were sourced from official documents, reports, and publications from the OHCSF, BPSR, NITDA, academic journals, and media reports. The study recommended, among other things, that the Office of the Head of Civil Service of the Federation should intensify the deployment of automation tools for data entry and document verification across all departments, expand the scope of workflow orchestration and automated task routing to cover all administrative processes, and implement comprehensive change management strategies, including continuous training and stakeholder engagement, to enhance the adoption and utilisation of the 1Gov Cloud ECMS for improved transparency and accountability.

Keywords: Robotic Process Automation (RPA), File Processing, Red Tape Reduction, Public Sector Automation, Federal Ministries, Departments and Agencies (MDAs)

Introduction

Globally, the public sector is undergoing a profound digital transformation, with governments increasingly turning to automation technologies to enhance efficiency, reduce operational costs, and improve service delivery. The application of innovative technologies such as robotic automation of processes and intelligent processing of documents has made it possible to standardise and streamline procedures in government operations (OECD, 2023). The OECD Observatory of Public Sector Innovation has documented how robotic process automation (RPA) and intelligent document processing (IDP) have been deployed in advanced economies to automate file processing, reduce errors, and allow professionals to focus on higher-value tasks. For instance, the Regional Government of Andalusia in Spain implemented RPA and IDP to automate the annual review of pension declarations, achieving automated processing of approximately 65% of submissions and significantly reducing processing time and resource expenditure. These global experiences demonstrate that RPA holds transformative potential for public administration by handling repetitive, rule-based tasks such as data entry, document verification, and form validation with speed, consistency, and transparency. Narrowing the discourse to Africa, the continent stands at the threshold of a digital transformation that could redefine governance for generations to come (Businessday NG, 2025). With Africa's youthful

population, rapid mobile adoption, and increasing demand for efficient public services, governments across the continent now have a unique opportunity to rethink how they serve their citizens. However, too many African citizens continue to face slow, opaque, and error-prone public services—from land registration and passport issuance to business licensing and pension disbursements—creating barriers that frustrate users, diminish trust in government, and limit economic participation. Robotic Process Automation (RPA) has been identified as a strategic tool that can address these inefficiencies by handling repetitive tasks with speed and consistency, thereby reducing the opportunity for corruption and freeing human personnel to focus on more complex challenges. Ministries across Africa, particularly in Nigeria and the ECOWAS region, have been encouraged to identify high-volume, low-complexity workflows—especially in areas like immigration, trade, and civil service human resources—and launch automation pilot programmes to test, refine, and scale solutions.

In Nigeria's specific context, the public service has long been characterised by bureaucratic bottlenecks, manual record-keeping, corruption, and administrative red tape that have hindered efficient service delivery (Guardian, 2024). The Federal Government has recognised that bureaucracy must no longer be a bottleneck but a driver of efficiency, innovation, and inclusive growth (Tinubu, 2026). Consequently, the Nigerian government has announced plans to deploy emerging technologies such as Artificial Intelligence, Machine Learning, Blockchain, and Robotic Process Automation (RPA) across Ministries, Departments, and Agencies (MDAs) to improve governance and public service delivery (Arabi, 2025). The Bureau of Public Service Reforms (BPSR), under the leadership of Director-General Dr. Dasuki Arabi, has emphasised the need for Nigeria to deploy RPA and other emerging technologies into government operations for effective service delivery. The BPSR has noted that automation provides a unique opportunity to close service delivery gaps, promote inclusive development, and eliminate bureaucratic bottlenecks. In tandem, the National Information Technology Development Agency (NITDA) has identified machine learning and robotic process automation in document automation as a key area of impact, with the agency already scanning physical letters and using automation tools to read contents and automatically forward them to relevant departments (Abdullahi, 2025).

Leading to the area of the study, the Office of the Head of the Civil Service of the Federation (OHCSF) has emerged as the vanguard of Nigeria's digital transformation agenda in the public service (Walson-Jack, 2025). In November 2025, the Head of the Civil Service of the Federation, Mrs. Didi Esther Walson-Jack, announced the migration of the OHCSF to the 1Gov Cloud Enterprise Content Management System (ECMS)—a landmark move that signals a new era for the Federal Civil Service, driving efficiency, enhancing workflow automation, and reinforcing the government's commitment to a paperless, tech-driven future. The OHCSF has set a target for a paperless Civil Service, and by December 2025, all 33 Ministries and five Extra-Ministerial Departments had achieved full digital compliance. This study focuses on the OHCSF as the coordinating hub for civil service reforms, examining the impact of Robotic Process Automation on file processing and red tape reduction within Nigerian Federal MDAs.

The broad objective of this study is to examine the impact of Robotic Process Automation on file processing efficiency and red tape reduction in Nigerian Federal MDAs, with a specific focus on the Office of the Head of the Civil Service of the Federation.

Literature Review

This chapter provides conceptual clarification of key variables relevant to the study from scholarly definitions, including Robotic Process Automation, file processing, and red tape reduction. It adopted appropriate theoretical frameworks relevant to the study, specifically the Technology Acceptance Model (TAM) and the Diffusion of Innovation (DOI) theory, to underpin the investigation. Existing empirical literature were reviewed and gaps identified, leading to the development of a conceptual framework that guides the study's methodology and analysis.

Robotic Process Automation (RPA)

Robotic Process Automation (RPA) is defined as “a technology that allows the development of (multiple) computer programs (i.e., bots) that automate rules-based business processes through the use of GUIs” (Plattfaut and Borghoff, 2022). RPA is described as an umbrella term for tools that operate on the user interface of other computer systems in the way a human would do, aiming to replace people by automation done in an “outside-in” manner (Gartner, as cited in Tornbohm, 2017). RPA is the technology that mimics the way humans interact with software to perform high-volume, repeatable tasks, creating software programs or bots that can log into applications, enter data, calculate and complete tasks, and copy data between applications or workflows as required (TechTarget, 2024). RPA is a process whereby software robots (bots) perform repetitive, rule-based tasks that were previously performed by human actors, more quickly and accurately, by interacting with existing software applications through user interfaces (MDPI, 2023). RPA is referred to as a relatively new technology comprising software agents called ‘bots’ that mimic the manual path taken by a human through a range of computer applications when performing certain tasks in a business process (ScienceDirect, 2020). RPA is a low- to no-code Commercial Off the Shelf (COTS) technology that can automate repetitive, rules-based tasks, recording actions performed across a personal computer, accessing systems, and performing specific tasks for human users (Digital.gov, 2020).

File Processing and Red Tape Reduction

File processing is defined as the systematic handling of official documents, records, and correspondence from the point of receipt or creation through to final disposition, encompassing activities such as data entry, verification, sorting, routing, storage, and retrieval (PwC, 2020). File processing is described as the administrative workflow involving the receipt, classification, distribution, tracking, and archiving of paper-based or electronic documents within an organisation to ensure timely and accurate completion of tasks (BusinessDictionary, 2021). Red tape reduction is the process of identifying, simplifying, or eliminating excessive bureaucratic procedures, regulations, and administrative requirements that impede efficiency and delay service delivery (World Bank, 2020). Red tape is referred to as the excessive or unnecessarily complex rules, procedures, and formalities that create administrative burdens, increase processing times, and frustrate citizens and businesses (OECD, 2017). Red tape reduction is a process whereby governments and organisations systematically review and streamline administrative processes, eliminating redundant steps and simplifying documentation requirements to enhance operational efficiency and improve user experience (UNDP, 2019).

Transparency and Accountability

Transparency is defined as the principle of openness and accessibility of information, whereby government agencies make their decisions, processes, and performance data available to the public in a timely, understandable, and accessible manner (World Bank, 2020). Transparency is described as the extent to which citizens can access information about government operations, policies, and outcomes, enabling them to monitor and evaluate public sector performance (UNDP, 2019). Accountability is the obligation of public officials and institutions to answer for their actions, decisions, and performance, and to accept responsibility for failures or misconduct (OECD, 2017). Accountability is a process whereby public servants are held responsible for their actions through mechanisms such as performance reporting, audits, oversight bodies, and citizen feedback systems (Transparency International, 2021). Transparency and accountability are referred to as the twin pillars of good governance, ensuring that public officials act in the best interest of citizens, reduce opportunities for corruption, and build public trust in government institutions (World Bank, 2022). Transparency and accountability are fundamental principles of democratic governance that foster integrity, efficiency, and responsiveness in public service delivery (UNDP, 2020).

Workflow Orchestration and Automated Task Routing

Workflow orchestration is defined as the centralised coordination and management of complex business processes, ensuring that tasks are executed in the correct sequence, with the necessary data

and resources available at each step (Gartner, 2022). Workflow orchestration is described as the automation of a process or workflow that involves multiple steps, often spanning different systems and teams, coordinating the execution of tasks to achieve a specific outcome (IBM, 2021). Automated task routing is the process whereby incoming requests, documents, or tasks are automatically directed to the appropriate individual, department, or system based on predefined rules, criteria, or business logic (TechTarget, 2023). Automated task routing is referred to as an intelligent assignment mechanism that eliminates manual triage, reduces delays, and ensures that work is distributed efficiently to the most qualified or available resources (MDPI, 2022). Workflow orchestration and automated task routing are integral components of Robotic Process Automation that enable organisations to streamline complex administrative procedures, minimise human intervention, and accelerate service delivery (Digital.gov, 2021).

Data Entry Automation and Document Verification

Data entry automation is defined as the use of software robots (bots) to capture, extract, and input data into computer systems without manual human intervention, thereby eliminating repetitive keystroke operations and reducing errors (Plattfaut and Borghoff, 2022). Data entry automation is described as a core capability of Robotic Process Automation that enables organisations to transfer information between applications, databases, and systems with speed and accuracy (Digital.gov, 2020). Document verification is the process of automatically validating the authenticity, completeness, and accuracy of official documents using optical character recognition (OCR), artificial intelligence, and pattern recognition technologies (Gartner, 2020). Document verification is a process whereby RPA bots scan, extract, and cross-check information from documents against predefined rules or databases to confirm their validity (TechTarget, 2022). Data entry automation and document verification are referred to as the foundational elements of intelligent document processing, significantly reducing processing times and eliminating the human errors associated with manual data handling (MDPI, 2023).

Research Methods

The study adopted mixed methods design (survey and case study research designs). The survey research design was adopted as the primary quantitative approach, which involves the collection of data from a sample of respondents through structured questionnaires to measure variables, test hypotheses, and generalize findings to the broader population of civil servants in the Office of the Head of Civil Service of the Federation. The case study research design was adopted as the qualitative approach, which involves an in-depth investigation of the OHCSF as a single case to provide contextual understanding of RPA implementation, file processing dynamics, and red tape reduction experiences from the perspective of key informants.

The justification for adopting the survey design is that it allows for the collection of quantitative data from a large sample size, enabling statistical analysis, hypothesis testing, and generalization of findings to the entire population of civil servants in the OHCSF (Creswell and Creswell, 2018). The survey design is particularly suitable for examining the relationship between RPA constituents (data entry automation, document verification, workflow orchestration, automated task routing, and ECMS implementation) and the dependent variables (file processing speed, red tape reduction, transparency, and accountability) because it facilitates the measurement of these variables using standardized instruments and allows for the application of inferential statistical techniques such as regression analysis and correlation analysis (Saunders, Lewis, and Thornhill, 2019).

The justification for adopting the case study design is that it provides a comprehensive and contextualized understanding of the phenomenon under investigation, capturing the lived experiences, perceptions, and challenges of civil servants engaged in RPA-enabled file processing (Yin, 2018). The case study design is particularly suitable because the OHCSF represents a unique and critical case as the coordinating hub for Nigeria's civil service digital transformation agenda, and in-depth interviews with key informants such as directors, deputy directors, and IT officers will provide rich qualitative

data on the mechanisms through which RPA impacts file processing and red tape reduction. The combination of survey and case study designs allows for triangulation of findings, whereby quantitative data from the survey are validated and enriched by qualitative insights from interviews, thereby enhancing the validity, reliability, and credibility of the research findings (Creswell and Plano Clark, 2017).

The mixed methods design is further justified by the nature of the research objectives and questions, which require both breadth (to measure the extent and statistical significance of RPA's impact) and depth (to understand the processes, contextual factors, and experiences underlying the statistical relationships). This methodological approach aligns with the Task-Technology Fit theoretical framework, as it enables the examination of both the objective fit between RPA technology and file processing tasks (measured quantitatively) and the subjective perceptions of civil servants regarding this fit and its outcomes (captured qualitatively) (Goodhue and Thompson, 1995).

Results and Discussion

The model shows a strong correlation ($R = 0.788$) between the predictors (automation of data entry and document verification, workflow orchestration and automated task routing, and implementation of 1Gov Cloud ECMS) and file processing efficiency and red tape reduction. About 62.1% of the variance in file processing efficiency and red tape reduction is explained by the model ($R^2 = 0.621$). The adjusted R^2 of 0.618 confirms a good model fit, indicating that the model generalises well to the population. The Durbin-Watson statistic of 1.876 suggests no autocorrelation in the residuals, as the value is close to 2, indicating that the residuals are independent.

Interpretation of ANOVA

The overall ANOVA model is statistically significant, with a Sum of Squares value of 96.457, df (degree of freedom) of 3, Mean Square value of 32.152, F (facto) value of 189.324, and Sig. value of 0.000. The F-statistic of 189.324 with a p-value of 0.000 (which is less than 0.05) indicates that the regression model is statistically significant in predicting file processing efficiency and red tape reduction. This confirms that at least one of the independent variables significantly contributes to the prediction of the dependent variable.

Interpretation of Multiple Regression Coefficients

The Constant shows the Unstandardized Coefficient of 0.325, Std. Error of 0.098, and Standardized Coefficient (Beta) of -.

The result of hypothesis one (H_{01}): The unstandardized coefficient for automation of data entry and document verification (X_1) is 0.482 with a standard error of 0.045. The standardized Beta coefficient is 0.412, with a t-value of 10.711 and a statistically significant p-value of 0.000. The null hypothesis (H_{01}) is therefore rejected because the calculated p-value of 0.000 is less than the estimated value of 0.05. The result of the hypothesis therefore revealed that there is a significant relationship between automation of data entry and document verification and file processing speed. It is concluded that automation of data entry and document verification has a significant positive effect on file processing speed in the Office of the Head of Civil Service of the Federation, Nigeria.

The result of hypothesis two (H_{02}): The unstandardized coefficient for workflow orchestration and automated task routing (X_2) is 0.356 with a standard error of 0.051. The standardized Beta coefficient is 0.298, with a t-value of 6.980 and a statistically significant p-value of 0.000. The null hypothesis (H_{02}) is therefore rejected because the calculated p-value of 0.000 is less than the estimated value of 0.05. The result of the hypothesis therefore revealed that there is a significant relationship between workflow orchestration and automated task routing and red tape reduction. It is concluded that workflow orchestration and automated task routing has a significant positive effect on red tape reduction in the Office of the Head of Civil Service of the Federation, Nigeria.

The result of hypothesis three (H_{03}): The unstandardized coefficient for implementation of 1Gov Cloud ECMS (X_3) is 0.124 with a standard error of 0.085. The standardized Beta coefficient is 0.096, with a

t-value of 1.459 and a statistically significant p-value of 0.145. The null hypothesis (H_{03}) is therefore accepted because the calculated p-value of 0.145 is greater than the estimated value of 0.05. The result of the hypothesis therefore revealed that there is no significant relationship between implementation of 1Gov Cloud ECMS and transparency and accountability enhancement. It is concluded that while the implementation of 1Gov Cloud ECMS has a positive effect on transparency and accountability, the effect is not statistically significant at the 5% level of significance.

Finding of hypothesis one indicated that t-value 10.711, p-value 0.000, which is lower than the estimated threshold of 0.05. The result shows that automation of data entry and document verification has significantly influenced file processing speed. This finding aligned with the study conducted by Carvalho and Ferreira (2025), which examined automation in public oversight in Brazil and revealed that RPA implementation contributed to an average reduction of 72 days in process duration and an increase of 14 pages per report, highlighting significant gains in efficiency. This finding also aligned with the Technology Acceptance Model (TAM), as propounded by Davis (1989), who posited that perceived usefulness and perceived ease of use are fundamental determinants of technology adoption and usage behaviour, and that when users perceive a technology as useful for enhancing their task performance, they are more likely to adopt and utilise it effectively. The significant positive relationship between automation of data entry and document verification and file processing speed confirms that RPA tools are perceived as useful by civil servants, leading to their effective utilisation and consequent improvements in processing efficiency.

Finding of hypothesis two indicated that t-value 6.980, p-value 0.000, which is lower than the estimated threshold of 0.05. The result shows that workflow orchestration and automated task routing has significantly influenced red tape reduction. This finding aligned with the study conducted by the IEEE (2025), which examined RPA in the public sector and revealed that the implementation of RPA can accelerate the decision-making process, guarantee compliance, and simplify the administrative framework, thereby reducing bureaucratic red tape. This finding also aligned with the Task-Technology Fit (TTF) theory, as propounded by Goodhue and Thompson (1995), who posited that the degree to which a technology assists an individual in performing his or her portfolio of tasks determines whether the technology will enhance performance outcomes. The significant positive relationship between workflow orchestration and automated task routing and red tape reduction confirms that when RPA technology fits the task requirements of civil servants—namely the need for efficient routing and tracking of files—it leads to enhanced performance in terms of reduced bureaucratic bottlenecks and faster service delivery.

Finding of hypothesis three indicated that t-value 1.459, p-value 0.145, which is higher than the estimated threshold of 0.05. The result shows that implementation of the 1Gov Cloud Enterprise Content Management System (ECMS) has not significantly enhanced transparency and accountability. This finding aligned with the study conducted by Vollenberg, Hackl, Matthies and Coners (2024), which examined acceptance of RPA in public sector institutions and revealed that any RPA project will not be successful if the relevant stakeholders' acceptance of the new technology is insufficient. The study further noted that research has not adequately addressed which factors influence the acceptance of RPA in public sector institutions, given the peculiarities of the public sector in the operation of processes. This finding also aligned with the Diffusion of Innovation (DOI) theory, as propounded by Rogers (1995), who posited that the rate of adoption of an innovation is influenced by its relative advantage, compatibility, complexity, trialability, and observability. The non-significant relationship between ECMS implementation and transparency and accountability enhancement suggests that the ECMS may not have been fully adopted or effectively utilised by all stakeholders, possibly due to compatibility issues with existing work practices, complexity of the system, or insufficient training and change management support. This finding underscores the importance of addressing stakeholder acceptance and providing adequate training and support to ensure that digital transformation initiatives achieve their intended outcomes in public sector institutions.

Conclusion

The study concluded that automation of data entry and document verification has significantly and positively influenced file processing speed in the Office of the Head of Civil Service of the Federation, Nigeria, as evidenced by the regression analysis ($\beta = 0.412$, $p = 0.000$), confirming that RPA enhances operational efficiency by reducing manual data handling and verification delays.

The study also concluded that workflow orchestration and automated task routing has significantly and positively influenced red tape reduction in the Office of the Head of Civil Service of the Federation, Nigeria, as evidenced by the regression analysis ($\beta = 0.298$, $p = 0.000$), confirming that automated routing and tracking of files eliminates bureaucratic bottlenecks and accelerates service delivery.

The study further concluded that the implementation of the 1Gov Cloud Enterprise Content Management System (ECMS) has not significantly enhanced transparency and accountability in file processing within the Office of the Head of Civil Service of the Federation, Nigeria, as evidenced by the regression analysis ($\beta = 0.096$, $p = 0.145$), suggesting that while the ECMS holds potential, its effectiveness is contingent upon adequate stakeholder acceptance, training, and change management support to achieve full adoption and utilisation.

Contribution to Knowledge

This study makes several significant contributions to the body of knowledge on Robotic Process Automation and public sector administration. First, the study provides empirical evidence on the impact of RPA on file processing efficiency and red tape reduction in a developing country context, specifically Nigeria. Prior studies have predominantly focused on developed countries such as Sweden (Andersson, Hallin, and Ivory, 2021; Söderström, Johansson, and Toll, 2020) and the United States (George Mason University, 2021), with limited empirical research from Sub-Saharan Africa. This study fills this geographical and contextual gap by examining the Nigerian Federal Civil Service, thereby contributing to the understanding of how RPA can address bureaucratic challenges in a developing country setting characterised by manual processes, resource constraints, and institutional weaknesses.

Second, the study contributes to the theoretical literature by applying and extending the Task-Technology Fit (TTF) theory to the context of RPA implementation in public sector file processing. The study demonstrates that the fit between RPA technology characteristics (automation of data entry and document verification, workflow orchestration and automated task routing) and task characteristics (file processing, document verification, routing) significantly influences performance outcomes (file processing speed and red tape reduction). This extends the application of TTF theory to the domain of public sector automation and provides empirical validation of the theory in a new context.

Third, the study provides empirical evidence on the specific constituents of RPA and their differential effects on administrative outcomes. The findings reveal that automation of data entry and document verification has the strongest effect on file processing speed ($\beta = 0.412$), followed by workflow orchestration and automated task routing on red tape reduction ($\beta = 0.298$), while ECMS implementation did not significantly enhance transparency and accountability ($\beta = 0.096$). This nuanced understanding of the differential impacts of RPA components provides valuable insights for researchers and practitioners seeking to optimise RPA deployment in public sector organisations.

Fourth, the study contributes methodologically by employing a mixed-methods design combining quantitative survey data ($n = 348$) with qualitative in-depth interviews ($n = 10$) and documentary analysis, providing triangulation of findings and a comprehensive understanding of the phenomenon. The study also provides a validated instrument for measuring RPA impact on file processing and red tape reduction in public sector contexts.

Fifth, the study contributes to the literature on digital transformation and e-governance in Nigeria by providing empirical evidence on the outcomes of the 1Gov Cloud ECMS initiative and the broader

digitalisation agenda of the Federal Civil Service. The findings provide benchmarks for future research and policy evaluation.

Ethics Information

This study was conducted in strict adherence to ethical principles and guidelines governing research involving human participants. The researcher ensured that all ethical considerations were addressed to protect the rights, dignity, and welfare of all participants involved in the study. The following ethical issues were considered throughout the research process:

Informed Consent: Prior to data collection, all participants were provided with detailed information about the purpose of the study, the nature of their participation, and their rights as participants. Informed consent was obtained from each participant, ensuring that they voluntarily agreed to participate in the study without any form of coercion or undue influence. Participants were informed that they had the right to withdraw from the study at any time without any negative consequences. For the key informants, consent was obtained verbally and documented, while for survey respondents, consent was implied through the completion and return of the questionnaire.

Confidentiality and Anonymity: The researcher guaranteed confidentiality and anonymity to all participants to protect their identities and responses. Participants were assured that their names, positions, and other identifying information would not be disclosed in any reports or publications arising from the study. The questionnaires were designed to be anonymous, with no personal identifiers such as names or staff numbers collected. Interview data were coded using participant numbers (e.g., Participant 1, Participant 2) rather than names to ensure anonymity. All data collected were stored securely in password-protected files and accessed only by the researcher and the supervisor.

Voluntary Participation: Participation in the study was entirely voluntary, and participants were free to decline participation or withdraw from the study at any stage without providing any reason. The researcher emphasised that non-participation or withdrawal would not affect their employment status, work relationships, or any other aspect of their professional lives. This was particularly important given that the study involved civil servants who might have felt obligated to participate due to hierarchical relationships.

Avoidance of Harm: The researcher took all necessary precautions to ensure that no physical, psychological, social, or economic harm came to participants as a result of their involvement in the study. The questionnaires and interview questions were designed to be non-intrusive and respectful, avoiding sensitive topics that could cause distress or discomfort. Participants were not subjected to any form of deception, manipulation, or stress during the research process.

Ethical Approval: The study received ethical approval from the appropriate institutional review board or ethics committee prior to data collection. The researcher obtained the necessary permissions and approvals from the Office of the Head of Civil Service of the Federation (OHCSF) to conduct the study within the organisation. The researcher complied with all institutional and national regulations governing research involving human participants.

Data Protection and Storage: All data collected during the study were stored securely in accordance with data protection principles. Physical data (questionnaires) were stored in locked cabinets, while electronic data (digital transcripts and questionnaires) were stored in password-protected files and encrypted storage devices. Access to the data was restricted to the researcher and the supervisor. The data will be retained for the duration of the research process and destroyed after the completion of the study, as per institutional guidelines.

Honesty and Integrity: The researcher conducted the study with honesty and integrity, ensuring that all data were collected, recorded, and reported accurately and transparently. The researcher did not manipulate, falsify, or misrepresent data to achieve desired outcomes. All sources and references were appropriately cited, and the researcher acknowledged the contributions of all individuals and organisations that facilitated the research.

Acknowledgment of Sources: The researcher ensured that all sources of information used in the study were properly acknowledged and cited to avoid plagiarism. The work of other scholars and researchers was appropriately referenced in the literature review, methodology, and discussion sections. The researcher complied with all intellectual property and copyright laws.

Transparency and Accountability: The researcher maintained transparency throughout the research process, ensuring that all aspects of the study, including the methodology, data collection, data analysis, and findings, were clearly and accurately reported. The researcher took responsibility for the accuracy and integrity of the research and ensured that the findings were presented objectively without bias.

Sensitivity and Respect: The researcher treated all participants with respect, courtesy, and sensitivity, recognising their time, expertise, and contributions to the study. The researcher acknowledged the value of each participant's input and ensured that their responses were handled with the utmost care and professionalism. The researcher also respected the organisational culture and protocols of the OHCSF, working collaboratively with management and staff to ensure a smooth and respectful research process. By adhering to these ethical principles and practices, the researcher ensured that the study was conducted in a manner that upheld the highest standards of research ethics, protected the rights and welfare of all participants, and produced credible and trustworthy findings.

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Finally, the authors appreciate the contributions of research assistants and data analysts who assisted with data collection, transcription, and preliminary analysis. Any errors or omissions remain solely the responsibility of the authors.

Author's Declaration

We, the undersigned authors, hereby declare that this research titled "Impact of Robotic Process Automation (RPA) on File Processing and Red Tape Reduction in Nigerian Federal MDAs: A Study of the Office of the Head of Civil Service of the Federation" is our original work and has not been submitted previously for publication or consideration in any other journal or academic outlet.

We further declare that:

1. All data presented in this manuscript are authentic, and no part of this work has been fabricated, falsified, or misrepresented.
2. All sources of information, whether published or unpublished, have been duly acknowledged and properly cited in accordance with standard academic referencing conventions.
3. This research was conducted in compliance with applicable ethical standards. Informed consent was obtained from all participants, and confidentiality of their responses was strictly maintained.
4. All named authors have made substantial intellectual contributions to the conception, design, data collection, analysis, and/or interpretation of the findings presented in this manuscript.
5. All authors have read and approved the final version of this manuscript and agree to its submission for publication.

6. The corresponding author takes full responsibility for communicating with the editorial office, coordinating revisions, and ensuring that all co-authors are informed of the progress of the submission. We affirm that this manuscript has been prepared in accordance with the journal's guidelines for authors, and we are committed to upholding the highest standards of academic integrity and publication ethics.

Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Specifically:

- Financial Interests: No funding, grants, payments, or financial support from government agencies, private foundations, industry sponsors, or any other source has been received for this research that could have influenced its design, execution, or outcome.
- Personal Relationships: None of the authors has any personal, familial, or professional relationships with individuals or organisations that could be perceived as influencing the research or its findings.
- Academic and Professional Affiliations: No author holds employment, consultancies, advisory roles, board memberships, or other affiliations relevant to this manuscript that would constitute a conflict of interest.
- Intellectual Property: The authors have no patents, trademarks, or proprietary rights related to the research presented in this manuscript.
- Institutional Affiliation: While this study focuses on the Office of the Head of Civil Service of the Federation (OHCSF), the authors confirm that they are not employees of OHCSF and have no institutional or contractual relationship with the organisation that would compromise the objectivity or independence of this research.

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