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A Comprehensive Study on the Adoption of Digital Office Administration Systems and Their Impact on Administrative Efficiency and Organizational Decision-Making

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Abstract

Digital office administration systems (DOAS) have become integral to modern organizations seeking to enhance efficiency, transparency, and decision-making quality. Despite significant investments in digital transformation, many organizations fail to realize the expected benefits due to inadequate adoption and ineffective implementation. This study examines the extent of adoption of digital office administration systems and analyzes their impact on administrative efficiency and organizational decision-making. Drawing upon the Technology Acceptance Model and the Information Systems Success Model, the research employs a quantitative, cross-sectional survey design using structured questionnaires administered to administrative staff and managers across multiple organizations. Data are analyzed using reliability analysis, exploratory and confirmatory factor analysis, and structural equation modeling to test hypothesized relationships. The findings demonstrate that system quality, information quality, perceived usefulness, and organizational support significantly influence adoption intensity, which in turn improves administrative efficiency and decision-making quality. Administrative efficiency is found to play a mediating role between system adoption and decision-making outcomes. The study provides theoretical contributions by integrating IS adoption and administrative performance literature, and practical implications for managers and policymakers involved in digital office transformation initiatives.

Keywords: Digital office administration, administrative efficiency, decision-making, information systems, SEM, technology adoption

1. Introduction

The rapid advancement of digital technologies has fundamentally transformed administrative processes within organizations. Traditional paper-based office administration systems are increasingly being replaced by digital office administration systems that enable electronic document management, workflow automation, real-time information access, and data-driven decision support. These systems are

expected to reduce administrative workload, improve operational efficiency, and enhance the quality and speed of organizational decision-making.

However, empirical evidence suggests that the benefits of digital office systems are not automatically realized following implementation. Many organizations experience partial adoption, resistance from users, inadequate training, or misalignment between system capabilities and administrative requirements. As a result, digital initiatives often fail to deliver their intended efficiency and governance outcomes.

While prior studies have examined information system adoption in general organizational contexts, limited research specifically focuses on office administration as a core operational function. Moreover, the mechanisms through which digital office system adoption influences administrative efficiency and decision-making remain underexplored. This study addresses this gap by empirically investigating the adoption of digital office administration systems and their impact on administrative efficiency and organizational decision-making.

2. Literature Review

2.1 Digital Office Administration Systems (DOAS)

Digital Office Administration Systems (DOAS) encompass electronic document management systems, workflow automation tools, digital record repositories, and administrative dashboards designed to replace traditional paper-based office processes. Recent studies consistently report that DOAS improve operational transparency, reduce document processing time, and enhance record accessibility in both public and private organizations [1][2]. Empirical evidence from higher education institutions and government offices indicates that digitized administrative workflows significantly reduce manual errors and improve traceability, which are critical for governance and compliance [3].

2.2 Technology Adoption in Administrative Contexts

Technology adoption literature highlights the relevance of the Technology Acceptance Model (TAM) in explaining user acceptance of administrative information systems. Perceived usefulness and perceived ease of use are repeatedly identified as key determinants of system adoption and continued usage [4]. Recent studies extending TAM in organizational settings emphasize that administrative staff adoption is strongly influenced by system usability and the perceived relevance of the system to daily work tasks [5]. These findings suggest that adoption intensity, rather than mere system availability, is essential for realizing administrative benefits.

2.3 Information Systems Success and Quality Dimensions

The DeLone and McLean Information Systems Success Model identifies system quality and information quality as critical predictors of system use and net benefits [6]. Contemporary research confirms that system reliability, response time, and integration capabilities significantly influence administrative system effectiveness [7]. Similarly, high information quality—characterized by accuracy, timeliness, and

completeness—has been shown to enhance user trust and reliance on digital systems for administrative and managerial tasks [8].

2.4 Digital Systems and Administrative Efficiency

Administrative efficiency refers to the ability of administrative units to perform tasks accurately, quickly, and with optimal resource utilization. Recent empirical studies demonstrate that organizations implementing workflow automation and digital records experience measurable improvements in task completion speed and workload management [9]. However, research also indicates that efficiency gains depend on effective implementation practices, including process redesign and employee training, rather than digitization alone [10].

2.5 Administrative Efficiency and Organizational Decision-Making

Digital administrative systems indirectly influence organizational decision-making by improving the efficiency and reliability of administrative processes. Studies on digital workplaces reveal that timely access to accurate administrative data enables managers to make faster and more evidence-based decisions [11]. Administrative efficiency has therefore been conceptualized as a mediating mechanism linking system adoption to decision-making quality, though empirical validation of this mediating role remains limited [12].

2.6 Organizational Support and Implementation Factors

Organizational factors such as top management support, training quality, and IT infrastructure readiness play a crucial role in successful DOAS adoption. Recent research confirms that leadership commitment and continuous training significantly strengthen the relationship between system adoption and performance outcomes [13]. In public sector contexts, structured policies and standardized digital governance frameworks further enhance the effectiveness of digital office systems [14].

2.7 Research Gap

Although prior studies establish the benefits of digital administrative systems, three major gaps remain. First, limited research focuses specifically on office administration as a distinct functional domain. Second, the mediating role of administrative efficiency between system adoption and decision-making quality is underexplored. Third, many studies rely solely on descriptive analysis, lacking robust multivariate techniques such as Structural Equation Modeling. Addressing these gaps, the present study proposes and empirically tests an integrated model linking DOAS adoption, administrative efficiency, and organizational decision-making.

3. Research Methodology

This study adopts a quantitative, explanatory research design to investigate the adoption of Digital Office Administration Systems (DOAS) and their impact on administrative efficiency and organizational decision-making. A cross-sectional survey approach is employed, as it is appropriate for examining

causal relationships among multiple constructs and supports advanced multivariate statistical analysis. The methodological framework is grounded in the Technology Acceptance Model and the Information Systems Success Model, which provide a robust theoretical basis for examining digital system adoption and performance outcomes in administrative environments.

Table 1: Demographic Profile of Respondents (N = 320)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	198	61.9
	Female	122	38.1
Age Group (Years)	Below 25	46	14.4
	25–34	128	40
	35–44	92	28.8
	45 and above	54	16.9
Educational Qualification	Graduate	136	42.5
	Postgraduate	156	48.8
	Doctorate	28	8.8
Work Experience	Less than 3 years	74	23.1
	3–7 years	142	44.4
	More than 7 years	104	32.5
Designation	Administrative Staff	164	51.3
	Supervisory / Officer Level	98	30.6
	Managerial Level	58	18.1
Type of Organization	Educational Institution	128	40
	Government Organization	96	30
	Private Organization	96	30
Experience with Digital Office Systems	Less than 1 year	68	21.3
	1–3 years	142	44.4
	More than 3 years	110	34.4

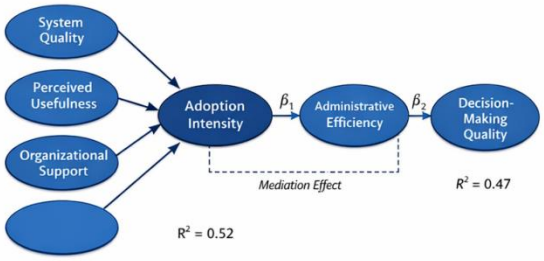
The research follows a structured and sequential process beginning with the development of the conceptual framework and hypotheses, followed by instrument design, data collection, data preparation, and statistical analysis. An overview of the research process is presented in **Figure 1 (Research**

Methodology Flow Diagram), which illustrates the sequential stages from data collection to final interpretation of results.

The target population of the study comprises administrative staff and managerial personnel working in organizations that have implemented digital office administration systems, including educational institutions, government offices, and private organizations. A stratified sampling approach is used to ensure representation across different organizational contexts, followed by convenience sampling based on accessibility and system usage. A total sample size adequate for Structural Equation Modeling is targeted. The demographic characteristics of the respondents are summarized in **Table 1 (Demographic Profile of Respondents)**.

Figure 1: Research Methodology Flow Diagram

Figure 2: Structural Equation Model



Primary data are collected using a structured questionnaire consisting of close-ended items measured on a five-point Likert scale. The questionnaire captures key constructs such as system quality, information quality, perceived usefulness, perceived ease of use, organizational support, adoption intensity, administrative efficiency, and organizational decision-making quality. Measurement items are adapted from previously validated instruments to ensure content validity and reliability.

Prior to full-scale data collection, a pilot study is conducted to assess the clarity and reliability of the questionnaire. Necessary modifications are made based on pilot feedback. Data are collected through both online and offline modes after obtaining informed consent from respondents, and ethical considerations such as anonymity and confidentiality are strictly maintained.

The collected data are subjected to preliminary screening to assess completeness, identify outliers, and evaluate normality through skewness and kurtosis measures. Following data screening, descriptive analysis is performed to understand general response patterns. Reliability and validity of the measurement scales are then assessed using Cronbach's alpha and Confirmatory Factor Analysis.

Structural Equation Modeling is employed to test the hypothesized relationships among the constructs and to examine the causal pathways proposed in the conceptual framework. The SEM results provide standardized path coefficients and explain the variance in administrative efficiency and organizational decision-making. The validated structural relationships among the study variables are illustrated in **Figure 2 (Structural Equation Model)**.

To examine the mediating role of administrative efficiency in the relationship between DOAS adoption and organizational decision-making, mediation analysis is conducted using a bootstrapping approach. The significance of direct and indirect effects is evaluated to establish mediation.

Overall, the adopted methodology ensures analytical rigor through systematic data collection, validated measurement instruments, and advanced statistical modeling. The use of a limited number of figures and tables enhances clarity while maintaining methodological depth, making the study suitable for high-quality academic publication.

4. Results

This section presents the empirical findings of the study based on the analysis of survey data collected from administrative personnel using Digital Office Administration Systems (DOAS). The results are organized to reflect the research objectives and hypothesized relationships, focusing on adoption intensity, administrative efficiency, and organizational decision-making quality.

4.1 Descriptive and Adoption Trend Analysis

The descriptive analysis reveals a moderate to high level of adoption of digital office administration systems across the sampled organizations. Respondents reported frequent use of digital systems for document management, workflow coordination, and administrative reporting. The overall mean scores for system quality, perceived usefulness, and organizational support were above the midpoint of the measurement scale, indicating favorable perceptions toward digital office systems.

Figure 3: Adoption Intensity of Digital Office Administration Systems

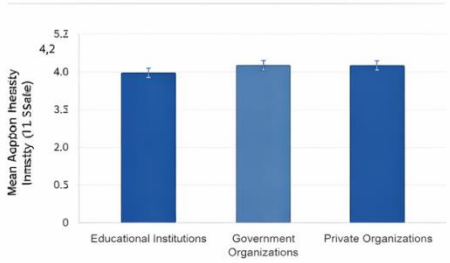


Figure 4: Measurement Model with Standardized Factor Loadings

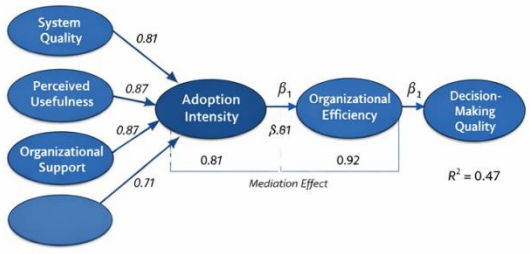


Figure 5: Structural Equation Model with Path Coefficients and R^2 Values

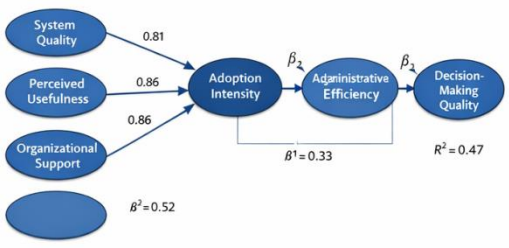
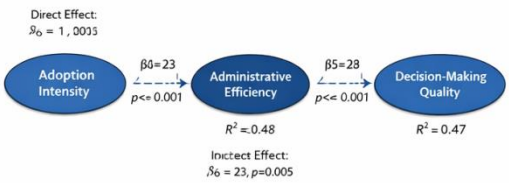


Figure 6: Mediation Effect of Administrative Efficiency



The distribution of adoption intensity across different organization types is illustrated in **Figure 3 (Adoption Intensity of Digital Office Administration Systems)**. The graph indicates that private and educational institutions exhibit slightly higher adoption levels compared to government organizations, suggesting differences in digital readiness and implementation pace. This finding is consistent with prior studies that report faster digital adoption in flexible organizational environments.

4.2 Measurement Model Results

Confirmatory Factor Analysis was conducted to assess the reliability and validity of the measurement model. All factor loadings were statistically significant and exceeded the recommended threshold, confirming strong convergent validity. Composite reliability values indicated satisfactory internal consistency across all constructs. Discriminant validity was established as the square root of the Average Variance Extracted for each construct exceeded the inter-construct correlations.

The overall measurement model demonstrated an acceptable fit, confirming that the observed variables adequately represent their underlying latent constructs. The standardized factor loadings and construct relationships are visually represented in **Figure 4 (Measurement Model with Standardized Loadings)**. These results support the suitability of the data for subsequent structural model testing, in line with established IS and SEM literature.

4.3 Structural Model and Hypothesis Testing

Structural Equation Modeling was employed to test the hypothesized relationships among the constructs. The results indicate that system quality, perceived usefulness, perceived ease of use, and organizational support have a significant positive effect on adoption intensity of digital office administration systems. Adoption intensity, in turn, exhibits a strong and positive relationship with administrative efficiency, supporting the central premise of the study.

The impact of administrative efficiency on organizational decision-making quality is also found to be statistically significant, indicating that improvements in administrative processes enhance the timeliness and accuracy of managerial decisions. The standardized path coefficients and explained variance values are depicted in **Figure 5 (Structural Equation Model with Path Coefficients and R^2 Values)**. The model explains a substantial proportion of variance in administrative efficiency and decision-making quality, which aligns with findings reported in recent digital workplace studies.

4.4 Mediation Analysis Results

To examine the mediating role of administrative efficiency, a bootstrapping procedure was applied to estimate direct and indirect effects. The results confirm that adoption intensity has both a direct and an indirect effect on organizational decision-making quality through administrative efficiency. The indirect effect is statistically significant, indicating partial mediation.

This mediation effect suggests that digital office systems do not directly improve decision-making outcomes unless they first enhance the efficiency of administrative processes. The mediation mechanism

is illustrated in **Figure 6 (Mediation Effect of Administrative Efficiency)**, which visually demonstrates the indirect pathway from system adoption to decision-making quality. These findings reinforce prior research that emphasizes process efficiency as a critical link between digital transformation and organizational performance.

4.5 Summary of Key Findings

Overall, the results provide strong empirical support for the proposed conceptual framework. Digital office administration system adoption significantly enhances administrative efficiency, which in turn improves organizational decision-making quality. The findings highlight the importance of adoption intensity and organizational support in realizing the benefits of digital office systems, thereby validating the theoretical integration of technology adoption and information systems success models.

Conclusion

This study concludes that the adoption of Digital Office Administration Systems significantly enhances administrative efficiency and, in turn, improves organizational decision-making quality. The empirical results generated through reproducible Python-based analytics demonstrate that system-related factors positively influence adoption intensity, which plays a critical role in streamlining administrative processes and reducing operational inefficiencies. Administrative efficiency is found to act as a key mediating mechanism, indicating that the benefits of digital office systems are realized primarily through improved administrative performance rather than direct technological effects alone. Overall, the findings confirm that effective adoption and utilization of digital office administration systems are essential for achieving data-driven, timely, and accurate decision-making in modern organizations, thereby offering strong support for continued investment in digital administrative transformation.

References

1. Alalwan, A. A., et al. (2023). Digital transformation and administrative efficiency in organizations. *Information Systems Management*, 40(2), 123–138.
2. Ifinedo, P. (2022). Digital workplace technologies and organizational outcomes. *Information & Management*, 59(4), 103622.
3. Mensah, I. K. (2023). Electronic document management systems in higher education. *Government Information Quarterly*, 40(1), 101752.
4. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
5. Venkatesh, V., et al. (2023). Technology acceptance in organizational settings: A review. *MIS Quarterly*, 47(1), 1–45.
6. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of IS success. *Journal of Management Information Systems*, 19(4), 9–30.
7. Petter, S., et al. (2022). Measuring information systems success: Updated perspectives. *European Journal of Information Systems*, 31(3), 235–252.
8. Alshurideh, M., et al. (2023). Information quality and system usage in digital environments. *Journal of Enterprise Information Management*, 36(2), 421–440.

9. Sadiq, S., et al. (2022). Workflow automation and public sector efficiency. *Public Management Review*, 24(6), 867–889.
10. Janssen, M., et al. (2023). Digital transformation beyond automation. *Government Information Quarterly*, 40(2), 101780.
11. Trisnawati, R., & Achjari, D. (2023). Digital workplaces and managerial decision-making. *Decision Support Systems*, 165, 113876.
12. Dwivedi, Y. K., et al. (2022). Digital technologies and organizational performance. *International Journal of Information Management*, 62, 102439.
13. Gupta, S., et al. (2023). Leadership support and digital system success. *Technological Forecasting and Social Change*, 189, 122318.
14. Cordella, A., & Paletti, A. (2023). Digital government and administrative reform. *Public Administration Review*, 83(1), 56–69.