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Accounting Fraud and Higher Education: Accountants' Perceptions of Integrating Forensic Accounting Education into University Accounting Curricula in Malaysia

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Abstract

The rising tide of corporate scandals—from Enron and Tyco to more recent cases such as Wirecard and Toshiba—has underscored the urgent need for enhanced mechanisms to detect, prevent, and investigate accounting fraud. Within Malaysia, financial crime remains a growing concern, as highlighted by the International Economic Crime Review conducted by PricewaterhouseCoopers (PwC), which identified the country as particularly vulnerable to financial misconduct. In this context, forensic accounting has emerged as a critical specialization within the accounting profession, equipping practitioners with the expertise to identify fraudulent practices, support litigation, and safeguard stakeholder interests.

This study examines the perceptions of Malaysian accountants regarding the integration of forensic accounting education into university accounting programs. Specifically, it investigates the extent to which forensic accounting training is viewed as a necessary addition to traditional accounting curricula and explores the factors that influence this perception. Building on the fraud triangle and fraud diamond frameworks, the research situates forensic accounting education as a strategic response to the increasing complexity of fraudulent schemes and the limitations of conventional audit practices.

Survey data collected from practicing accountants reveal that two main factors—(1) the perceived benefits of forensic accounting education and (2) the growing incidence of fraud—significantly influence support for curriculum integration. The findings emphasize that the inclusion of forensic accounting courses at both undergraduate and postgraduate levels would not only strengthen students' technical knowledge but also enhance their professional competencies in fraud prevention, detection, and litigation support. This study highlights the pressing need for Malaysian higher education institutions to adopt forensic accounting modules more systematically, aligning academic training with the realities of contemporary financial crime.

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Introduction

The collapse of major corporations such as Enron, WorldCom, Wirecard, and Toshiba has drawn global attention to the pervasive issue of financial fraud, which has severely eroded public trust in corporate governance and financial reporting. These scandals have highlighted the inadequacy of traditional auditing methods in detecting fraudulent activities and have positioned forensic accounting as an essential specialization for both the accounting profession and regulatory authorities. Forensic accounting is broadly defined as the systematic collection, analysis, and interpretation of financial data for the purposes of (1) litigation support and consulting, (2) expert witnessing, and (3) fraud investigation.

In recent decades, accounting fraud has evolved into a global phenomenon, with its prevalence exacerbated by economic crises and disruptive events such as the COVID-19 pandemic. The pandemic, in particular, created new vulnerabilities within organizations by accelerating digital transactions and exposing weaknesses in internal control systems, thereby increasing opportunities for fraud. As financial crimes become more complex, their detection and prevention present a persistent challenge to the accounting profession, requiring specialized competencies beyond conventional financial reporting and auditing practices.

Against this backdrop, the integration of forensic accounting education into university curricula is increasingly viewed as a critical factor for developing accountants who are equipped with the skills to detect, investigate, and prevent fraudulent activities. Such training not only enhances professional competence but also provides students with career opportunities in diverse sectors, including corporate governance, law enforcement, and government agencies such as the Federal Bureau of Investigation (FBI). In developed economies, particularly the United States, forensic accounting education has become a growing component of accounting programs. However, in developing nations such as Malaysia, the availability of dedicated forensic accounting courses remains limited. To date, only a few institutions—such as the Asia Pacific University of Innovation and Technology (APU) and Universiti Teknologi MARA (UiTM)—offer specialized forensic accounting programs at both undergraduate and postgraduate levels.

Prior studies suggest that Malaysian accounting graduates often perceive their formal education as lacking sufficient coverage of forensic accounting, leaving them underprepared to address fraud-related challenges in practice (Derek et al., 2013; Rezaee et al., 2016). Despite the growing recognition of forensic accounting globally, there is a notable absence of empirical research exploring Malaysian accountants' perceptions of the inclusion of forensic accounting education in university curricula. Furthermore, the limited body of literature highlights significant variation in perceptions regarding the necessity and relevance of such training across different professional and academic contexts.

This study aims to address these gaps by examining the perceptions of accountants in Malaysia toward the integration of forensic accounting education into accounting curricula. Specifically, it seeks to identify the factors influencing support for curriculum integration, including the perceived benefits of forensic accounting training and the increasing incidence of fraud. By contributing new evidence, this research highlights the importance of aligning accounting education with the realities of financial crime, thereby preparing graduates with the knowledge, skills, and ethical awareness necessary to detect and prevent fraudulent practices. Ultimately, strengthening forensic accounting education is not only vital to restoring public trust in financial reporting but also to enhancing the resilience and integrity of the accounting profession in Malaysia and beyond.

Findings

The study revealed three critical findings:

1. **High Support for Integration:** A majority of accountants surveyed expressed strong support for embedding forensic accounting into university curricula, citing its importance in strengthening ethical responsibility and fraud detection skills.

2. **Perceived Benefits as Key Drivers:** Respondents emphasized that forensic accounting education provides not only technical tools for identifying fraud but also enhances professional credibility and employability within sectors such as auditing, corporate governance, and law enforcement.
3. **Curriculum Gaps in Malaysia:** Despite rising demand, only a limited number of Malaysian universities—such as Asia Pacific University (APU) and Universiti Teknologi Mara (UiTM)—offer dedicated forensic accounting courses. The majority of accounting programs were seen as lacking adequate coverage of forensic topics, creating a gap between industry needs and academic preparation.

Fraud Triangle and Fraud Diamond

Fraudulent financial reporting often emerges from systemic weaknesses within organizational governance and the limited capacity of accountants to detect irregularities. Deficiencies in knowledge, professional skepticism, and investigative skills among accountants create opportunities for fraudsters to manipulate financial statements through fabricated documents, misstatements, or omissions (Chen et al., 2020). Research has shown a strong association between forensic accounting skills and the ability to detect fraud, with forensic training significantly improving detection outcomes (Popoola, 2015; Chukwu et al., 2019). The "Crazy Eddie" scandal in the United States illustrates how inadequate detection capabilities enabled prolonged corporate fraud (Tschakert, 2017).

Accountants play a central role in maintaining corporate integrity, assuring stakeholders of sound governance and ethical financial practices. Their responsibilities extend beyond routine financial reporting to include the detection of fraud indicators and the safeguarding of shareholder and public trust (Rezaee & Burton, 1997; Low et al., 2006; Ekanayake & Perera, 2014). Forensic training enhances accountants' ability to conduct fraud examinations, analyze motives, and provide expert testimony in litigation contexts.

The **Fraud Triangle**, first developed by Cressey (1953), posits that fraud occurs when three conditions are present: (1) perceived pressure, (2) perceived opportunity, and (3) rationalization. Building on this, Wolfe and Hermanson (2004) introduced the **Fraud Diamond**, which adds a fourth dimension—capability. This framework acknowledges that fraud requires not only motive and opportunity but also the technical ability and organizational position to override controls. Together, these models provide critical insight into why and how financial fraud occurs and emphasize the need for accountants with specialized forensic expertise.

Integration of Forensic Accounting Education

Education provides the foundation for knowledge acquisition, skill development, and critical thinking. In the context of fraud, prevention is more effective than detection after the fact. Corporate collapses have underscored the importance of embedding forensic accounting within accounting curricula to prepare graduates to prevent and detect fraudulent activities.

Over the past two decades, the accounting profession has called for universities to expand forensic accounting education, motivated by recurring financial scandals and the inadequacy of conventional training (Abdullah et al., 2014). Forensic accounting courses cover fraud theories, legal and ethical issues, evidence collection, data analysis, and litigation support. Studies from Korea, Bahrain, and Libya confirm a positive relationship between foren-

sic accounting education and the effectiveness of fraud detection (Rezaee & Burton, 1997; Zadeh & Ramazani, 2012; Hidayat & Al-Hadrami, 2015; Issa & Al-Azzabi, 2018). The consensus is that forensic education should be systematically incorporated into accounting curricula at undergraduate and postgraduate levels.

Availability of Forensic Accounting Education in Malaysia

In developed nations such as the United States, forensic accounting education is well established. However, in Malaysia, its availability remains limited. Only two universities—Asia Pacific University of Innovation and Technology (APU) and Universiti Teknologi MARA (UiTM)—offer specialized forensic accounting programs. Most Malaysian accounting curricula do not provide adequate coverage, leaving graduates ill-prepared for fraud prevention and detection.

Ibrahim and Abdullah (2010) identify several barriers to the development of forensic accounting in Malaysia:

- **High costs** associated with forensic services and litigation discourage their use, particularly among small and medium-sized enterprises (SMEs).
- **Preference for out-of-court settlements**, which reduces reliance on forensic accountants as expert witnesses.
- **Lack of legislative frameworks** mandating forensic accounting practices.
- **Weak whistleblower protection**, which deters reporting of fraudulent activities.

These factors collectively constrain the integration and development of forensic accounting in Malaysia.

Demand for Forensic Accounting

Although forensic accounting is relatively new in Malaysia, demand is increasing. Forensic accountants require multidisciplinary expertise in auditing, law, information systems, and investigation techniques. Their responsibilities include damage assessment, fraud investigation, litigation support, and valuation disputes (Zysman, 2004; Modugu & Anyaduba, 2013).

Corporate scandals such as Enron and Wirecard have demonstrated that strong governance mechanisms alone cannot prevent fraud, further amplifying the need for forensic accountants (Hidayat & Al-Sadiq, 2014). As fraudsters adapt and exploit new opportunities, forensic accounting has become indispensable for ensuring public trust in financial reporting.

Perceived Importance of Forensic Accounting Education

Scholars argue that inadequate professional education contributes to the persistence of fraud (Alabdullah et al., 2014). Forensic accounting education enhances professional credibility, reduces weaknesses in traditional auditing, and motivates students to engage in fraud evaluation (Hidayat & Al-Sadiq, 2014). Empirical evidence shows strong support among academics and practitioners for incorporating forensic accounting into accounting curricula. Beyond fraud prevention, forensic education broadens career opportunities in auditing, law enforcement, government, and corporate governance (Kramer et al., 2017).

Perceived Obstacles in Accounting Curricula

Despite its benefits, integrating forensic accounting faces curricular barriers. Rezaee et al. (2004) identified key challenges: overburdened curricula, faculty resistance due to lack of expertise, and insufficient institutional support. Albrecht and Sack (2002) argue that accounting curricula are outdated and fail to prepare students for dynamic business environments. Effective integration requires curriculum reform, administrative commitment, and recognition of forensic accounting as a core component of accounting education.

Perceived Additional Fraud Contents

Fraud-related content—such as financial statement fraud, criminology, and fraud psychology—is essential for forensic accounting education. Such materials enhance accountants' ability to understand the motivations and behavioral patterns behind fraudulent acts (Ramamoorti, 2008). Research confirms that including fraud-specific content strengthens students' capacity to identify irregularities and equips them for investigative roles (Hidayat & Al-Hadrami, 2015).

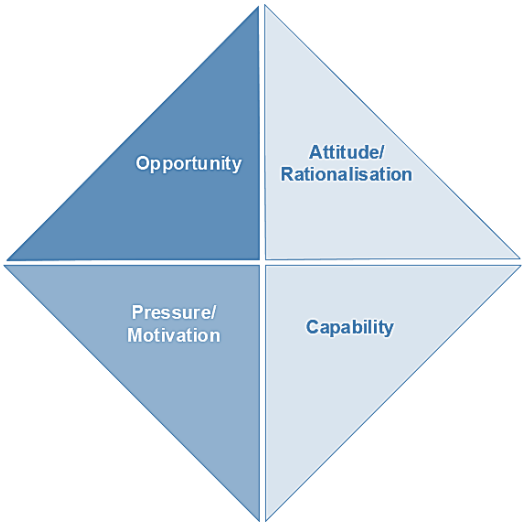
Theoretical Framework

This study is guided by the following hypotheses:

- **H1(D):** There is a significant relationship between the demand for forensic accounting practice and the integration of forensic accounting education into accounting curricula.
- **H1(PI):** There is a significant relationship between the perceived importance of forensic accounting education and its integration into accounting curricula.
- **H1(PO):** Perceived obstacles in accounting curricula significantly influence the integration of forensic accounting education.
- **H1(PA):** The inclusion of fraud-related content significantly influences the integration of forensic accounting education.

Research Methodology

This study adopts a **positivist paradigm** and applies a **deductive quantitative approach**. Data were collected using a structured questionnaire designed in Google Forms and distributed electronically to professional accountants, auditors, and accounting educators in Malaysia. The questionnaire employed five-point Likert scales to measure perceptions of demand, importance, obstacles, and fraud-related content.



The sample size was determined using Tabachnick and Fidell's (2011) formula:

$$N > 50 + 8M \quad N > 50 + 8M \quad N > 50 + 8M$$

where M = number of independent variables. With four independent variables, the minimum sample size required was 82. To enhance reliability, the final sample included 100 respondents.

Data were analyzed using **SPSS** with descriptive statistics, Pearson correlation, and multiple regression analysis. Hypotheses were tested at a 5% significance level ($p < 0.05$). ANOVA and F-tests were used to evaluate the overall model significance.

4. Results, Findings, and Discussion

4.1 Respondent Characteristics

A total of **100** valid responses were analyzed. Of these, **78%** were female and **22%** were male. In terms of age, **43%** were **18–20 years** old. Educational attainment shows that **47%** held a **bachelor's degree**, while **27%** reported

a **professional qualification** (e.g., **ACCA**, **CPA**). With respect to professional roles, **22** respondents worked as **audit associates**, **19** as **accounting assistants**, and **24** as **auditors or senior accountants**; the remainder occupied other accounting/auditing roles. Regarding experience in accounting/auditing, **26%** reported **≤ 1 year**, **47%** reported **2–5 years**, **9%** reported **6–10 years**, and **18%** reported **> 10 years**.

4.2 Respondents' Opinions on Integrating Forensic Accounting Education

Survey responses indicate that **60%** of participants reported being **aware of fraud concepts and theory**, while **40%** indicated a willingness to **enroll** if universities offered dedicated coursework. Moreover, **51%** believed forensic accounting should be **embedded within existing accounting and auditing courses**, and **58%** supported offering it at **both undergraduate and postgraduate** levels.

4.3 Model Summary

Table 1. Model summary

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	0.767	0.588	0.571	0.35831

The model explains **58.8%** of the variance in the **integration of forensic accounting education** (Adjusted R^2 = **0.571**), indicating a **moderately strong** relationship between the set of predictors and the dependent variable.

4.4 ANOVA

Table 2. ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.438	4	4.359	33.956	0.000
Residual	12.197	95	0.128	—	—
Total	29.634	99	—	—	—

The overall model is statistically significant (**F** = 33.956, **p** < 0.001), supporting the joint explanatory power of the predictors.

4.5 Coefficients and Hypothesis Tests

Table 3. Coefficient estimates

Predictor	Unstd. B	Std. Error	Std. Beta	t	Sig.
Constant	0.970	0.308	—	3.145	0.002
Demand (D)	0.133	0.087	0.139	1.530	0.129
Perceived Importance (PI)	0.229	0.103	0.249	2.226	0.028*
Perceived Obstacles (PO)	0.063	0.070	0.072	0.902	0.369
Additional Fraud Contents (PA)	0.361	0.080	0.433	4.493	0.000**

* p < 0.05, ** p < 0.001.

Table 4. Hypothesis testing summary

IV	Hypothesis	p-value	Decision
D	H1(D): Demand for forensic accounting practice → integration into curricula	0.129	Rejected

PI	H1(PI): Perceived importance of forensic education → integration into curricula	0.028	Accepted
PO	H1(PO): Perceived obstacles in accounting curricula → affect integration	0.369	Rejected
PA	H1(PA): Perceived additional fraud contents → integration	0.000	Accepted

4.6 Discussion of Findings

4.6.1 Demand for Forensic Accounting and Curricular Integration (H1[D])

- **Result:** Not supported (p = 0.129).
- **Interpretation:** Although industry and professional bodies forecast rising demand for forensic services, **demand alone** did **not** significantly predict program integration in this sample. This suggests Malaysian universities are **not primarily demand-reactive**; instead, integration decisions may depend more on **pedagogical priorities, accreditation standards, or perceived educational benefits** than on short-term market signals. Consequently, institutions should **not defer** curricular reform until demand reaches a threshold; proactive adoption remains warranted.

4.6.2 Perceived Importance of Forensic Education and Integration (H1[PI])

- **Result:** Supported (B = 0.229, p = 0.028).
- **Interpretation:** When stakeholders (faculty, practitioners, students) **recognize the educational value** of forensic accounting—e.g., enhanced fraud detection, litigation support competence, ethical decision-making—universities are **more likely** to integrate it. This aligns with prior work showing that **awareness of benefits** is a key driver of curricular change.

4.6.3 Perceived Obstacles in Accounting Curricula (H1[PO])

- **Result:** Not supported (p = 0.369).
- **Interpretation:** Common barriers (overcrowded syllabi, limited faculty expertise, administrative constraints) **did not** significantly deter integration in this model. This suggests that, while obstacles exist, they may be **manageable** or **secondary** relative to perceived importance and content availability—particularly when leadership commits to reform.

4.6.4 Perceived Additional Fraud Contents (H1[PA])

- **Result:** Supported (B = 0.361, p < 0.001).
- **Interpretation:** The **availability and clarity of fraud-focused content** (e.g., fraudulent financial reporting and analysis, corruption schemes, investigation techniques, criminology/behavioral insights) is a **strong positive predictor** of integration. Programs are more likely to adopt forensic modules when **teaching materials, cases, and assessments** are readily deployable and aligned with learning outcomes.

5. Conclusion, Implications, Limitations, and Recommendations

5.1 Conclusion

This study examined Malaysian accountants' perceptions of integrating **forensic accounting education** into university accounting curricula. Among four predictors, **perceived importance (PI)** and **availability of fraud contents (PA)** significantly and positively influenced integration, whereas **demand (D)** and **perceived obstacles (PO)** did not. These findings indicate that **curricular adoption is propelled by recognized educational benefits and practical, high-quality course materials**, rather than by market demand or the presence of obstacles. Given the prevalence and sophistication of financial fraud, the results reinforce the urgency of **mainstreaming forensic competencies** across accounting education in Malaysia.

5.2 Implications

- **Theoretical:** Supports curriculum-change models in which **perceived pedagogical value** and **resource readiness** (content availability) outweigh external demand signals.
- **Practical (Universities):** Prioritize **developing or acquiring robust fraud content** (cases, datasets, simulations, assessment rubrics) and **mapping learning outcomes** to audit, assurance, ethics, governance, and analytics courses.
- **Professional Practice:** Embedding forensic skills enhances graduates' **fraud-risk assessment**, **investigative techniques**, **evidence handling**, and **expert-witness communication**, thereby strengthening the profession's capacity to **prevent and detect** fraud.

5.3 Limitations

- **Sampling:** Non-probability sampling and a **modest sample (N = 100)** limit generalizability.
- **Self-report Bias:** Perceptions may not perfectly reflect institutional behavior or actual curricular decisions.
- **Cross-sectional Design:** Causal inferences are constrained; longitudinal tracking of adoption decisions was not performed.
- **Context Specificity:** Findings pertain to **Malaysia** and may not transfer wholesale to other jurisdictions.

5.4 Recommendations

1. **Curriculum Design:** Introduce a **sequenced pathway** (introductory, intermediate, advanced) covering fraud schemes, investigative analytics, digital forensics, litigation support, and ethics.
2. **Content Development:** Build a **case library** (local and international), anonymized datasets, and **capstone investigations** assessed via written expert reports and mock testimony.
3. **Faculty Capacity:** Provide **faculty development** (short courses, co-teaching with practitioners) and incentivize **AACSB/IFAC-aligned** pedagogical innovation.
4. **Industry Partnerships:** Formalize collaborations with **ACFE chapters, audit firms, regulators, and law enforcement** to secure guest lectures, internships, and real-world project briefs.
5. **Assessment & Assurance of Learning:** Align forensic learning outcomes with program competencies (e.g., **fraud-risk analytics, evidence evaluation, reporting**) and embed them in AoL cycles.
6. **Policy Support:** Encourage professional bodies and quality agencies to **recognize forensic modules** within accreditation standards and promote **whistleblower protection awareness**.
7. **Further Research:** Conduct **longitudinal** and **multi-institution** studies, test **mediation** (e.g., role of faculty readiness) and **moderation** (e.g., institutional resources), and triangulate with **objective adoption metrics**.

Practical Implications

The findings highlight that **embedding forensic accounting education and dedicated fraud content** is pivotal for successful curricular integration. Several independent factors exert a **direct influence** on adoption, underscoring the need for universities to prioritize both the **pedagogical value** and the **availability of high-quality fraud materials**.

From a professional standpoint, delivering robust forensic coursework will:

- **Strengthen practitioner competence** in fraud risk assessment, investigation, and evidence handling;
- **Enhance employability**, particularly in roles involving fraud examination, **litigation support**, and **expert-witness** services;

- Expand accountants' **career pathways** across public practice, internal audit, compliance, corporate governance, and law-enforcement interfaces.

For students and early-career professionals, **fraud-focused learning assets** (e.g., financial-statement manipulation cases, corruption typologies, investigative analytics) will:

- Deepen conceptual understanding of **fraud schemes and offender behavior**;
- Improve capabilities in **detecting anomalies** in financial statements and **evaluating internal controls**;
- Elevate **ethical sensitivity** and professional skepticism in real decision contexts.

Theoretical Implications

This study contributes to curriculum-change theory by showing that **perceived educational value** and **content readiness** (i.e., availability of actionable fraud topics and materials) are more decisive for integration than external demand signals or perceived obstacles. For scholars:

- The results provide an empirical basis to **extend models of curricular adoption**, positioning **benefit salience** and **resource readiness** as proximal drivers of change.
- Future work can build on this study to **propose or test mediated models** (e.g., perceived importance → administrative commitment → integration) and **moderated models** (e.g., the role of institutional resources or accreditation pressures).

For policymakers and quality agencies, the study consolidates evidence relevant to **program standards**, **assurance of learning**, and **ethics/fraud competencies** within accounting education.

Limitations

Several limitations qualify the interpretation and generalization of the results:

1. **Sampling & Generalizability**: A **non-probability sample** (N ≈ 100) limits external validity. Findings may not generalize beyond Malaysia or to all sub-sectors of the profession.
2. **Self-Report & Nonresponse Bias**: Perception measures are subject to response bias and varying familiarity with forensic concepts.
3. **Cross-Sectional Design**: Causal inferences are constrained; the study captures a **single time point** rather than longitudinal change.
4. **Model Breadth**: Only **four predictors** were examined. Additional determinants (e.g., **faculty capability**, **budget**, **accreditation requirements**, **industry partnerships**) may further explain integration decisions.

To enhance robustness, future research should **increase sample size**, adopt **probability sampling** where feasible, triangulate perceptions with **objective adoption metrics**, and consider **multi-method** approaches.

For Universities and Program Leaders

1. **Curriculum Architecture**

Implement a **scaffolded pathway** (introductory → intermediate → advanced) covering: fraud schemes, forensic data analytics, digital forensics, interviewing, evidence law, expert reporting, and ethics.

2. **Content & Assessment**

Develop a **national/departmental case library**, anonymized datasets, and **capstone investigations** culminating in an **expert report** and **mock testimony**. Align learning outcomes with **audit/assurance** and **ethics** competencies.

3. **Faculty Capacity**
Invest in **faculty development** (short courses, certifications, co-teaching with practitioners). Encourage scholarship of teaching aligned with **IFAC/AACSB** expectations.
4. **Stakeholder Engagement**
Conduct **needs assessments** with students, employers, and professional bodies to calibrate topic coverage and skills emphasis.
5. **Quality Assurance**
Integrate forensic outcomes into **Assurance of Learning** cycles; use rubrics that evaluate **analytical rigor**, **evidence evaluation**, and **ethical judgment**.

For Government and Professional Bodies

6. **Policy & Support**
Provide **targeted grants** and **material support** for course development; recognize forensic modules in accreditation standards; reinforce **whistleblower protection** awareness and legal literacy.
7. **Partnerships**
Formalize collaborations with **audit firms (including Big Four)**, **ACFE chapters**, **regulators**, and **law enforcement** to secure guest lectures, internships, datasets, and practice-based projects.

For Future Research

8. **Design Enhancements**
Employ **mixed methods** (e.g., semi-structured interviews with faculty, students, and employers), **longitudinal tracking** of integration decisions, and **comparative studies** across institutions/countries.
9. **Model Expansion**
Test additional predictors (e.g., **institutional readiness**, **budget constraints**, **digital infrastructure**) and explore **mediation/moderation** effects.

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Ethical Considerations

The study adhered to established ethical guidelines for academic research. Participation was voluntary, with informed consent obtained from all respondents. Data confidentiality and anonymity were strictly maintained, and responses were used solely for research purposes.

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Conflict of Interest

The author declares no conflict of interest in relation to this study.

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