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A Peer Reviewed (Refereed) International Journal**Article Information**Received: 28th Feb, 2025Accepted: 28th Feb, 2025Published: 25th April, 2025**TOKENIZED MARKETPLACE AND ROLE OF AI IN ASSET VALUATION AND
FRAUD DETECTION IN SERVICE BASE FIRMS IN DELTA STATE**¹Emem Udo Essiet, ²Christopher Ihonor, ³Dr. Ngozi Amaka Nwokoro¹ Department of Economics, University of Uyo, Uyo, NIGERIA.²Department of Marketing, School of Business Studies, Delta State Polytechnic, Ogwashi-Uku,³Department of Business Administration, Kingsley Ozumba Mbadiwe University, Ideato, Imo State,
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ABSTRACT

The implementation of tokenized markets and the function of artificial intelligence (AI) in improving asset value accuracy and fraud detection among service-based companies in Delta State, Nigeria is investigated in this paper. Blockchain-enabled tokenization and artificial intelligence technologies provide chances for enhanced openness, operational efficiency, and financial integrity as digital transformation speeds throughout world marketplaces. Using a standardized questionnaire sent to 103 chosen service-based companies, the study used a quantitative approach with data examined using t-test analysis, Pearson correlation, and descriptive statistics. Results show a modest degree of knowledge and acceptance of tokenized markets; companies which have adopted the technology claim better asset value accuracy. Especially via real-time monitoring and anomaly detection, AI-based systems were proven to be quite successful in spotting and stopping fraud. Nonetheless, among early adopters, technical integration issues—including infrastructure and regulatory limitations—were not statistically significant in restricting uptake. The research comes to the conclusion that while tokenized platforms and artificial intelligence are useful instruments for financial accuracy and risk reducing, more general use calls for targeted awareness, legislative backing, and infrastructure spending. Policy changes, public-private cooperation, capacity development, and ongoing research to facilitate scaled adoption throughout the service industry constitute recommendations.

Keywords: *Tokenized, Marketplace, Role of Ai, Asset Valuation***INTRODUCTION**

Digital innovation is driving a notable global change right now. Blockchain, tokenization, and artificial intelligence (AI) among other emerging technologies are changing company models, redefining asset ownership, increasing operational efficiency, and bolstering internal fraud control. Awakened, (2024). These changes are not only affecting the industrial and financial sectors but also significantly changing the scene of service-based companies—businesses mostly dependent on intangible assets, client

connections, and knowledge-based solutions. Madhani, (2012). Tokenization—a notion that has become increasingly important since it allows real-world or intangible asset ownership rights to be digital tokens kept on a safe blockchain network—at the core of these technological developments. Intellectual property, service contracts, invoicing, and even future cash flows may all be represented by these tokens among other assets. Such digital tokens are traded or swapped clearly, safely, and quickly in a tokenized market, therefore possibly changing the value and transaction behavior of companies with their assets. Tanveer, et al. (2025)

Parallel with this, artificial intelligence (AI) has developed as a transforming agent with uses in many spheres of industry. AI is allowing wiser decision-making Badmus, et al. (2024) from automating menial chores to running sophisticated analytics. Within the framework of asset valuation and fraud detection, artificial intelligence offers service-based companies a dynamic and data-driven method of evaluating the value of their assets and spotting anomalies or threats. AI systems can examine trends, identify abnormalities, and flag fraudulent activity in real-time using technologies such machine learning, natural language processing, and predictive analytics—capabilities well beyond those of conventional techniques. Bello, Olufemi, (2024). & Ebrahimiyan, (2021) claim that first noticed in the financial technology (fintech) sector, tokenization first became known mostly through the success of cryptocurrencies like Bitcoin and Ethereum. Beyond digital currency, however, tokenization now encompasses real estate, art, goods, and progressively service-related assets. Startups and professional service providers are starting to tokenize invoices and contracts, for example, thereby enabling more flexible financing and liquidity. Tokenized assets provide various advantages in worldwide markets: fractional ownership, more liquidity, lower transaction costs, and more openness. tanveer, et al. 2025 Furthermore providing further defense against manipulation and fraud are the distributed character of blockchain-based tokenized markets. These platforms provide new income sources and increase digital economy participation by letting companies tokenize previously illiquid or non-traditional assets. Tanveer, et al. (2025)

Particularly in industries where intangible assets predominate, the conventional method of valuing assets frequently depends on human entry, historical financial data, and subjective opinion. This has rendered asset appraisal prone to errors, particularly in sectors of quick development like services. Common assets for service-based companies in Nigeria and Delta State especially include client connections, brand equity, goodwill, and intellectual property—assets whose value is dynamic and multifarious. John, E. and colleagues 2024.

AI models provide a more solid and objective method of asset appraisal. AI systems may assess asset values with more precision by consuming enormous volumes of structured and unstructured data—from market trends, consumer behavior, competition analysis to macroeconomic indicators. Achumie, et al (2025). For a major benefit to consulting or healthcare companies, machine learning algorithms may examine customer retention data to provide client contracts or subscriptions predictive value. Moreover, artificial intelligence enables organizations to monitor and change asset prices in real time, therefore facilitating constant valuation. In tokenized markets, where asset prices vary depending on investor interest and market circumstances, this is especially important. In this sense, tokenization and artificial intelligence complement each other to improve the general dependability and integrity of valuation procedures. Akpan, M. (2024)

As Moses, T. (2019) puts it, fraud is still a regular and expensive threat to companies all over, including Nigeria. Fraud may manifest itself in service-based companies in many ways: financial misstatements, procurement fraud, cybercrime, insurance fraud, payroll fraud, and more. With emerging economies especially at danger owing to poor regulatory supervision and digital infrastructure gaps, PwC's Global Economic Crime and Fraud Survey (2022) shows that over 50% of firms worldwide report having encountered some kind of economic crime in the last two years. Often reactive rather than proactive, traditional fraud detection techniques They depend on manual audits or set policies that are useless in spotting intricate or changing fraud trends. Olushola, A.; Mart, J. (2024). Here AI has a clear benefit. AI-powered fraud detection systems can learn from previous events and keep their detecting powers becoming better. Bello, O.; Olufemi, K. (2024). These technologies indicate strong potential of fraudulent transactions before they create major harm, thereby identifying strange behavior patterns in real time. Growing acceptance of digital services—especially in banking, logistics, and healthcare—in Nigeria has

extended the surface area of opportunity and risk open for service-based companies. In this context Goswami, M. J. (2024), AI systems that can examine vast data quantities, identify abnormalities, and create warnings without human interaction provide a vital line of defense. Crucially, these solutions work especially well when combined with blockchain-based platforms, which provide traceability and unchangeable information.

Though beyond its contribution to the petroleum sector, Delta State is one of Nigeria's oil-producing areas Oguntoye, M. & Oguntoye, A. (2021). has a thriving and expanding services sector. From small and medium-sized businesses (SMEs) in professional consulting and legal services to bigger companies in healthcare, education, finance, and ICT, service-based businesses make for a significant share of state economic activity. High reliance on human capital, customer interaction, and intangible resources defines many companies, so correct valuation and fraud protection become especially difficult. significant Delta State service-based companies still suffer significant operational and financial limitations even if the services industry is somewhat important economically. Insufficient advanced systems for fraud detection and asset management Vieras, B.et al (2025), restricted access to financial markets Inefficiencies in valuation techniques and Claessens, S. (2006) compromise their ability for sustainable development and competitiveness. Furthermore, the need for more effective, open, and automated systems has never been more strong in a turbulent economic environment influenced by inflation, currency volatility, and regulatory uncertainty. Some of these issues Brewer, J., et al. (2024) might be addressed by combining tokenized platforms with artificial intelligence solutions. Yet, the understanding, uptake, and preparedness for such technologies remain restricted in Delta State. Most companies lack the technical infrastructure, technical know-how, and strategic vision needed to incorporate these technologies into their activities. As a consequence, their assets remain undervalued, underused, and subject to internal and external dangers, including fraud.

Gradually rising as a center of fintech and blockchain innovation in Africa is Nigeria. By means of programs such as the eNaira launch and regulatory sandbox systems, the Central Bank of Nigeria (CBN) has exhibited growing enthusiasm in advancing financial technology. Startups in locations like Lagos, Abuja, and Port Harcourt are also innovators in digital banking, crowd-funding, and asset tokenizing. Still, the spread of these ideas to second-tier nations like Delta is somewhat limited. National innovative policy still does not match regional firm-level adoption. For instance, companies in Warri, Asaba, Ughelli, and other areas of Delta State might still be running using manual or analog systems even while financial centers would have access to blockchain development teams and AI experts. Therefore, the actual implementation of tokenized markets and AI tools for asset appraisal and fraud detection in these areas is still in its infancy, so research and policy development find a rich field in this area Bello, O.; Olufemi, K. (2024).

Though both tokenization and artificial intelligence are strong on their own, their combined use produces a symbiotic connection that has especially great potential for companies. Rade, N. (2023). Assets are digital representations in a tokenized market, which enables automatic ownership transfer and documentation. These systems can continually assess asset value, identify suspicious transaction activity, and even suggest ideal trading circumstances when coupled with artificial intelligence. Blockchain technology guarantees immutability, openness, and security by means of which all transactions are verifiable and tamper-proof. In settings where regulatory enforcement and confidence are lacking, this is especially helpful. By offering real-time insights into asset performance and risk exposure, artificial intelligence (AI) improves this even more so allowing companies owners and investors to make informed choices. A Delta State logistics company may tokenize its delivery contracts, employ artificial intelligence to assess the creditworthiness of customers or partners, and leverage blockchain tracking and settlement of these services. In a similar vein, a private healthcare provider may tokenize future patient care subscriptions, use artificial intelligence to assess the actuarial worth of patient commitments, and spot any insurance claim fraud or abuse. This research intends to provide practical insights for business leaders, legislators, investors, and technology suppliers by analyzing how service-based companies in Delta State comprehend, embrace, and profit from tokenization and artificial intelligence. The results may guide focused efforts meant to hasten digital transformation in underdeveloped economic areas of Nigeria.

Statement of the Problem

Many Delta State service-based companies still mostly depend on traditional methods for asset appraisal and fraud detection, although growing worldwide awareness and slow acceptance of tokenized markets

and artificial intelligence technology. Many times, these systems have inefficiencies, lack of openness, and vulnerability to human manipulation or mistake. Particularly very prevalent in service-based businesses, intangible assets like intellectual property or future service contracts may not fairly represent the actual worth of assets using conventional valuation techniques. Furthermore, a big hazard to company continuity and profitability in Nigeria is fraud, which ranges from payroll fraud, procurement fraud, financial statement manipulation to cyber-related schemes. Most companies, however, lack the technology tools or ability to spot intricate fraud schemes early enough to minimize harm. With its ability in anomaly detection, natural language processing, and deep learning, artificial intelligence presents a good answer. Nevertheless, its use in the local setting is limited by elements like expense, lack of knowledge, poor data quality, and regulatory ambiguity. Though they might redefine asset ownership and liquidity for service companies, tokenized markets can go underused. Lack of understanding, technical knowledge, and doubt about blockchain uses help to explain the limited acceptance. Furthermore, lacking empirical evidence or scholarly research clarifying the connection between tokenization, artificial intelligence-driven asset value, and fraud prevention in the particular context of service-oriented companies in Delta State.

By investigating the junction of these technologies and their pragmatic uses, obstacles, and effects on the value and integrity of service-based companies in Delta State, this paper aims to close this disparity.

2.0 THEORETICAL FRAMEWORK

Technology Acceptance Model (TAM) – Davis (1989)

Two factors TAM stresses as determining a person's acceptance of technology are perceived usability and perceived usefulness. The perceived value of a technology determines how much one feels it will increase performance or output. How fast a user thinks technology can be picked up and used defines perceived ease of use. In the framework of tokenization in service base companies, perceived value might be related to the capacity of service base businesses to improve financial access, reduce transaction costs, increase efficiency, and improve general company and sector performance. Perceived ease of use may relate to elements such as the availability of training and assistance and the simplicity and user friendliness of tokenizing systems.

3.0 EMPIRICAL STUDIES

The influence of artificial intelligence on fraud detection of listed deposit money banks in Nigeria was investigated in Hussaini, Nuraddeen, Sulaiman (2024). Artificial intelligence served as the independent variable; fraud detection was the dependent variable. Automated chatbot, deep learning machine, machine learning solutions, and natural language processing will be the artificial intelligence determinants in this work. This subject will cover geography mostly from Nigeria. The research will span 11 years, from 2012 to 2022; throughout this time CBN adopted cashless policy into the Nigerian financial system. More importantly, around this time several banks included artificial intelligence into their daily business. This research used survey design; so, the study used a self-administered questionnaire as the data collecting tool. The information came from banks that deposit money in Kaduna state. Simple random sampling technique will help ten of the fourteen listed deposit money banks in Nigeria to be chosen. Version 20 of statistics packages for statistical sciences (SPSS) will be the instrument. The influence of the independent variable on the dependent variable will be projected using regression analysis, which also helps either accept or reject null hypothesis. We will do validity and dependability tests. Table 4.6 shows that the automated conversation boat has P-value 0.000 and a coefficient value of 0.414. This indicates that banks of deposit money benefit much from automated chat boats. Table 4.6's regression model showed that P value 0.009 and coefficient value 0.213 for deep learning machine. This indicated that deep learning machines are favorably and greatly influencing fraud detection in banks handling deposit money. From Table 4.6 it was noted that the machine learning solution had P value 0.069 and a coefficient value 0.172. The 2023 Eneh, Okeke, & Amahalu research found how artificial intelligence affected fraud detection of deposit money banks in Awka-South Local Government Area, Anambra State, Nigeria. Artificial intelligence has several shortcomings and issues that prevent its broad acceptance even with its obvious and financial advantages. With automation, evil deeds like phishing and virus distribution to software might be hard to find. Though technology has made fraud detection feasible, companies still face several

difficulties. Ironically, technological developments also help criminals create fresh approaches to evade discovery. The approach of this study was field survey research. There were six hundred and fifty one (651) employees of the fourteen deposit money institutions under sampling. The sample size of 248 was found using the Taro Yamane formula. Out of the 248 given copies of the questionnaire, 174 were collected. The instrument's validity and dependability were shown successful. With SPSS version 23, descriptive statistics was used; inferential statistics utilizing Cronbach Alpha, Spearman's Correlation and Paired Sample T-assess was used to assess the hypotheses. The specific findings revealed that Facial recognition artificial intelligence has a significant and positive effect on transaction monitoring (t-statistic = 6.9622; p-value = 0.000); Chatbot artificial intelligence has a significant and positive effect on transaction monitoring (t-statistic = 4.909; p-value = 0.000); Digital assistant artificial intelligence has a significant and positive effect on transaction monitoring (t-statistic = 6.5659; p-value = 0.000) of deposit money banks in Awka-South Anambra State, Nigeria at 5% level of significance respectively. This paper advised companies to use artificial intelligence tools to offer better security and surveillance possibilities, which would also let human identification be completely automated hence improving productivity while also increasing the rate of accuracy and the detection of fraud. Investigated the impact of artificial intelligence on corporate value of Greek companies perifanis and kitsios (2023). We discussed 139 peer-reviewed pieces. Review findings show artificial intelligence powers improve many corporate value sources. According to the research, companies will only be successful in the digital transformation alignment of the current day by exactly embracing and applying new, innovative technology.

4.0 METHODOLOGY

Research Design

This study adopted an **ex post facto research design** to investigate the role of artificial intelligence (AI) in asset valuation and fraud detection within tokenized marketplaces among service-based firms in Delta State. According to Kowalczyk (2022), the ex post facto design is a quasi-experimental method that examines the relationship between independent and dependent variables without manipulating them. This design is suitable because both the implementation of tokenized technologies and the application of AI in asset valuation and fraud detection are pre-existing phenomena that cannot be manipulated by the researcher. The design allows for a systematic and objective analysis of the effect of tokenization and AI integration on asset reliability and fraud mitigation in the selected service-based firms.

Population of the Study

The target population for this study comprises service-based firms operating in Delta State, Nigeria that have adopted or are in the process of adopting tokenized marketplaces and AI technologies for operational purposes such as asset valuation, fraud detection, and transaction validation. These include sectors such as financial services, consulting, legal services, real estate, IT-based services, and logistics companies. The focus on these firms is due to their increasing reliance on digital technologies for service delivery and operational efficiency.

Sample Size and Sampling Technique

To determine an appropriate sample size, the Krejcie and Morgan (1970) table was utilized. Based on the estimated population of service-based firms within Delta State that have integrated tokenized or AI technologies, a total sample of 103 firms was selected. This sample size provides a statistically significant representation of the population while ensuring practical feasibility in data collection. A purposive sampling technique was used to identify firms that meet the inclusion criteria, specifically firms that utilize or have implemented a tokenized platform, firms that apply AI tools in asset valuation or fraud detection and firms operating within the service sector in Delta State.

Instrumentation

A structured questionnaire was developed and used as the main data collection instrument. The questionnaire was divided into two major sections:

- **Section A:** Captured demographic and firmographic details such as industry type, number of employees, level of digital adoption, and years of operation.
- **Section B:** Focused on the core study variables, including:
 - Use of tokenized marketplaces,
 - Integration of AI in asset valuation,
 - AI-based fraud detection strategies,
 - Perceived effectiveness, and
 - Challenges associated with these technologies.

The questionnaire items were developed in alignment with existing literature and the study's research objectives. Likert-scale questions were used to gauge the extent of technology use and its impact.

Validity and Reliability of the Instrument

Experts in blockchain technologies, artificial intelligence, and service operations checked the questionnaire to guarantee content validity. These professionals included credentialed accountants, digital asset managers, and IT consultants conversant with tokenization and fraud analytics. Before distribution, at least two experts examined and approved every questionnaire item to guarantee clarity, relevance, and congruence with the study goals. Ten service-based companies not part of the main research underwent a pilot study for dependability testing. Cronbach's Alpha was used to gauge the instrument's internal consistency; reliability coefficients fell between 0.73 to 0.85. These reasonable standards show a great degree of internal dependability, as advised by Sekaran & Bougie (2016).

Method of Data Collection

The researcher used a direct administration method to distribute the questionnaire to selected firms. An introductory and authorization letter was presented to firm representatives to ensure credibility and secure participation. The questionnaires were completed by key personnel such as IT managers, financial analysts, compliance officers, or business development executives who were knowledgeable about their firm's digital infrastructure.

Method of Data Analysis

Data collected were analyzed using both descriptive and inferential statistics:

- Descriptive statistics (frequencies, percentages, mean scores, and standard deviations) were used to summarize demographic data and measure the extent of tokenization and AI use across firms.
- For inferential analysis, Pearson Product Moment Correlation was employed to determine the relationship between AI usage and asset valuation efficiency as well as fraud detection capability.
- Simple regression analysis was also used to assess the predictive power of AI and tokenized platforms on asset valuation accuracy and fraud reduction effectiveness.

These analyses were carried out using Statistical Package for the Social Sciences (SPSS) version 26.0, ensuring precision and statistical rigor.

Ethical Considerations

In line with ethical standards, all respondents were informed about the purpose of the study and assured of the confidentiality and anonymity of their responses. Participation was voluntary, and respondents had the right to withdraw from the study at any time. The researcher ensured that data collected were used solely for academic purposes.

Objectives of the Study

The general objective of this study is to investigate the impact of tokenized marketplaces and AI on asset valuation and fraud detection in service-based firms in Delta State.

The specific objectives are to:

1. Examine the level of awareness and adoption of tokenized marketplaces among service-based firms in Delta State.
2. Analyze the role of AI in enhancing asset valuation accuracy in service-based firms.
3. Assess the effectiveness of AI-driven fraud detection mechanisms employed by service-based firms.

5.0 DATA ANALYSIS AND INTERPRETATION

Table 1: Analysis of demographic variables

Sex	No. of Respondents	% of Respondents
MALE	41	39.8
FEMALE	62	60.2
Total	103	100
Age	No. of respondents	% of Percentage
20 – 25	21	20.4
26 – 30	24	23.3
31 – 35	17	16.5
36 – 40	31	30.1
41 – Above	10	9.7
Total	103	100
Marital Status	No. of Respondents	% of Respondents
Single	32	31.1
Married	50	48.5
Divorced	9	8.7
Widow/Widowers	12	11.6
Total	103	100
Qualification of respondents	No. of Respondents	% of Respondents
Proficiency certificate	20	19.4
DIPLOMA	16	15.5
BSC	27	26.2
MSC	31	30.1
PHD	9	8.7
Total	103	100
years of service Distribution	No. of Respondents	% of Respondents
1-5 years	26	25.2
6-10 years	49	47.6
11-15 years	12	11.6
16 years and above	17	16.5
Total	103	100

Table 1 shows that whilst 62 respondents (60.2% of the sample population) were female, 41 respondents (39.8% of the sample population) were male. Table 3 reveals that 21 respondents (10.4% of the sample) were between the ages of 20 and 25. 21 respondents (20.4% of the sample) were between the ages of 20 and 25. Of the sample, 24 respondents—23.3%—were between the ages of 26 and 30. Of the 17.5% of respondents between the ages of 31 and 35, 31 respondents (30.1% of the sample) fell between the ages of 36 and 40; 10 respondents (9.7%) fell between the ages of 41 and above. Of the 32 respondents (31.1% of the sample), 47 respondents (48.5% of the sample) were married, only 9 respondents (8.7% of the sample) were divorced, and only 12 respondents (11.6%) were single. 20 respondents, representing 19.4% of the sample, were proficiency certificate holders; 16 respondents, representing 15.5% of the population, were diploma holders; 27 respondents, representing 26.2% of the population, were holders of BSC certificates; 31 respondents, representing 30.1% of the population, were MSC certificate holders; and only 9 respondents, representing 8.7% of the population, were PHD holders. 26 respondents, representing 25.2% of the sample, had worked for 1–5 years; 49 respondents, representing 47.6% of the sample, had also worked for 6–10 years; only 12 respondents, representing 11.6% of the sample, were within the service year of 11–15 years; and only 17 respondents, representing 16.5% of the sample, had worked for 11–15 years.

Answering of Research questions

Research question One: What is the level of awareness and adoption of tokenized marketplaces among service-based firms in Delta State?

Table 2: percentage analysis of level of awareness and adoption of tokenized marketplaces among service-based firms in Delta State

Variable	Category	Freqy	Per (%)
Awareness of Tokenized Marketplaces	Aware	75	72.8%
	Not Aware	28	27.2%
Adoption of Tokenized Marketplaces	Adopted	45	43.7%
	Not Adopted	58	56.3%
Level of Adoption (If Adopted)	Fully Integrated	20	44.4%
	Partially Integrated	25	55.6%
Awareness of AI in Asset Valuation	Aware	63	61.2%
	Not Aware	40	38.8%
Adoption of AI in Fraud Detection	Adopted	40	38.8%
	Not Adopted	63	61.2%

The table presents the frequency and percentage distribution of responses to questions regarding the level of awareness and adoption of tokenized marketplaces, and AI technologies in service-based firms. Awareness indicates whether firms are aware of tokenized marketplaces or AI in asset valuation/fraud detection. Adoption shows whether firms have fully or partially integrated tokenized marketplaces or AI into their operations.

Research question Two: How does AI contribute to improving asset valuation in service-based firms?

Table 3: analysis of AI contributes to improving asset valuation in service-based firms

AI Contribution to	Category	Freq	Pere (%)
Asset Valuation			
Improvement in Accuracy	Strongly Agree	35	34.0%

AI Contribution to	Category	Freq	Pere (%)
Asset Valuation	Agree	45	43.7%
	Neutral	15	14.6%
	Disagree	6	5.8%
	Strongly Disagree	2	1.9%
	Strongly Agree	30	29.1%
Speed of Valuation	Agree	40	38.8%
	Neutral	18	17.5%
	Disagree	11	10.7%
	Strongly Disagree	4	3.9%
	Strongly Agree	32	31.1%
Consistency in Valuation	Agree	41	39.8%
	Neutral	19	18.4%
	Disagree	7	6.8%
	Strongly Disagree	4	3.9%
	Strongly Agree	22	21.4%
Cost Efficiency	Agree	38	36.9%
	Neutral	23	22.3%
	Disagree	14	13.6%
	Strongly Disagree	6	5.8%
	Strongly Agree	28	27.2%
Reduction of Human Error	Agree	42	40.8%
	Neutral	19	18.4%
	Disagree	9	8.7%
	Strongly Disagree	5	4.9%
	Strongly Agree	28	27.2%

The table presents the frequency and percentage distribution of responses to statements about how AI contributes to improving asset valuation in service-based firms. The **categories** capture various ways AI is perceived to improve asset valuation, including accuracy, speed, consistency, cost efficiency, and

reduction of human error. Respondents indicated their agreement with each statement on a Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree).

Research question Three: How effective are AI-based systems in detecting and preventing fraud in service-based firms?

Table 4: analysis of AI-based systems in detecting and preventing fraud in service-based firms

Variable	Category	Freq	Perc (%)
Perceived Effectiveness of AI in Fraud Detection	Very Effective	25	24.3%
	Effective	35	34.0%
	Moderately Effective	23	22.3%
	Not Effective	15	14.6%
	Not Applicable	5	4.9%
Frequency of AI Fraud Detection Systems Used	Daily	10	9.7%
	Weekly	20	19.4%
	Monthly	12	11.7%
	Rarely	30	29.1%
	Never	31	30.1%
Impact of AI Systems on Fraud Prevention	Significant Impact	30	29.1%
	Moderate Impact	40	38.8%
	Low Impact	20	19.4%
	No Impact	13	12.6%

The table shows frequency and percentage distributions for firms' perception of the effectiveness of AI in fraud detection and prevention. The Perceived Effectiveness category indicates how firms assess the capability of AI in detecting and preventing fraud. Frequency of AI use shows how often firms rely on AI systems for fraud detection. The Impact category highlights how firms rate the impact of AI systems on preventing fraud, from significant to no impact.

Research Hypotheses Testing

Hypothesis	t-value	df	P-value	Decision
H ₀₁ : There is no significant relationship between the adoption of tokenized marketplaces and asset valuation accuracy in service-based firms.	2.57	102	0.012	Reject H ₀₁ (Significant relationship)
H ₀₂ : AI does not significantly enhance fraud detection in service-based firms.	1.98	102	0.048	Reject H ₀₂ (AI enhances fraud detection)
H ₀₃ : There is no significant impact of technological integration challenges on the adoption of tokenization and AI.	0.89	102	0.372	Fail to Reject H ₀₃ (No significant impact)

- **t-value:** The calculated t-statistic from the T-test.
- **df (degrees of freedom):** The degrees of freedom for the sample size ($N-1 = 103 - 1 = 102$).
- **p-value:** The significance level of the T-test.

- **Decision:** Based on the p-value (usually compared to a significance level of 0.05), we either reject the null hypothesis (H_0) or fail to reject it.
- **H₀₁:** There is a significant relationship between the adoption of tokenized marketplaces and asset valuation accuracy ($p = 0.012 < 0.05$, so reject H_{01}).
- **H₀₂:** AI significantly enhances fraud detection ($p = 0.048 < 0.05$, so reject H_{02}).
- **H₀₃:** There is no significant impact of technological integration challenges on the adoption of tokenization and AI ($p = 0.372 > 0.05$, so fail to reject H_{03}).

Discussion of Findings

According to the descriptive study, a good number of Delta State service-based companies have modest to low knowledge of tokenized markets. A tiny group of creative companies, mostly in the financial, IT, and consultancy sectors, did, however, demonstrate more acceptance and knowledge of blockchain-based tokenization solutions. These companies are improving transaction openness, ownership tracking, and operational effectiveness by using tokenized systems. This implies that even although tokenized markets are becoming more and more popular worldwide, their local acceptance is still in a developing stage mostly limited by lack of knowledge, regulatory clarity, and infrastructure. Results of the descriptive study and hypothesis testing show that among service-based companies, AI-based solutions are regarded as rather successful in identifying and stopping fraud. Respondents confirmed that artificial intelligence tools include predictive modeling, anomaly detection, and real-time transaction monitoring assist to reduce risks and find fraudulent activity with little human involvement. The t-test findings further validated this as H_{02} was disproved, therefore demonstrating that artificial intelligence statistically significantly improves fraud detection in service companies. This is consistent with world trends that place artificial intelligence as a main enabler of operational resilience and digital security. The study also revealed that companies using tokenized markets demonstrated better asset value accuracy. Digital tokens representing real or intangible goods are immutably traceable, auditable, and therefore this is true. Particularly in companies which handle intellectual property, real estate, and service rights, the rejection of H_{01} shows a substantial positive correlation between tokenization and exact asset value.

Conclusion

The junction of artificial intelligence in asset appraisal and fraud detection inside service-based businesses in Delta State was investigated in this paper along with tokenized markets. The results confirm that, even if knowledge of and acceptance of tokenized platforms are still developing, there is compelling data showing how well they improve asset value accuracy. Furthermore, the research shows how important artificial intelligence is in stopping fraud as it gives companies a competitive edge by means of improved security and efficiency. Notwithstanding these advantages, obstacles like technical infrastructure and regulatory uncertainty nevertheless endanger general use.

Recommendations

The results and conclusion guide the following suggestions: Blockchain and artificial intelligence specialists should be worked with by government agencies and industry groups to plan seminars, workshops, and pilot projects meant to educate service-based companies on the advantages and use of tokenized markets. Particularly in asset-backed digital finance, clearer regulations and supporting legislation from organizations such as the Nigerian Communications Commission (NCC) and the Central Bank of Nigeria (CBN) would help to direct the use of tokenization and artificial intelligence technology. Tax incentives, subsidies, or soft loans given by the government to companies investing in blockchain and artificial intelligence infrastructure—especially SMEs in the service sector—should help to boost adoption.

Programmes for personnel internal training and skill development should be given top priority in companies so as to increase technological preparedness. Adoption of artificial intelligence and blockchain education into business training might be greatly facilitated by cooperation between tech centers and institutions.

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