WEST AFRICA DYNAMIC JOURNAL OF HUMANITIES, SOCIAL AND MANAGEMENT SCIENCES AND EDUCATION: DEPARTMENT OF COMMUNICATIONS, UNIVERSITY OF CAPE COAST, GHANA
Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

EFFECT OF FINANCIAL TECHNOLOGY ON FINANCIAL INCLUSION OF SMALL AND MEDIUM-SIZED ENTERPRISES ENTREPRENEURS IN NIGER STATE, NIGERIA

By

[1]Suleiman Ndako Bagudu (PG Student),
Department of Business Administration, Faculty of Management and Social Sciences, Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria,

[2]SARKINDAJI, Bashir Danlami (PhD)
Department of Business Administration, Faculty of Management and Social Sciences, Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria

&

[3]SAYEDI, Shuaibu Ndagi (PhD)
Department of Business Administration, Faculty of Management and Social Sciences, Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria

Abstract

This research work examines the effect of Financial Technology (FinTech) on the financial inclusion of Small and Medium-sized Enterprises (SME) in Niger State, Nigeria. The study however specifically explores the influences of perceived risk and agent trust on financial inclusion among SMEs in Niger State, Nigeria. The paper adopts quantitative research design through cross-sectional survey method. The targeted population is 454,000 registered SMEs in Niger State. The study sample size is 440, and participants were selected through purposive sampling. Primary data were collected via a structured questionnaire, with 348 out of 440 distributed copies of the questionnaire deemed suitable for analysis. Multiple linear regression was utilized for data analysis, facilitated by SPSS Version 27. The findings indicate that perceived risk has a negative and significant effect on financial inclusion, while agent trust has no significant effect on financial inclusion. Based on these findings, it is recommended that FinTech providers and policymakers prioritize robust security measures and comprehensive education campaigns to mitigate perceived risks, while also exploring other critical determinants beyond direct agent trust to enhance financial inclusion among SMEs.

Keywords: Agent Trust, Financial Inclusion, Fintech, Perceived Risk, SMEs

WEST AFRICA DYNAMIC JOURNAL OF HUMANITIES, SOCIAL AND MANAGEMENT SCIENCES AND EDUCATION: DEPARTMENT OF COMMUNICATIONS, UNIVERSITY OF CAPE COAST, GHANA
Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

Introduction

Financial inclusion emerged as a vital development objective across developing economies, as it fosters access to essential financial services such as savings, credit, insurance, and digital payments for underserved populations, especially small and medium-sized enterprises (SMEs). Financial inclusion refers to the availability and accessibility of formal financial services to individuals and businesses at an affordable cost (Demirgüç-Kunt et al., 2022). SME is a business entity that operates on a relatively small scale compared to large corporations, characterized primarily by the size of its workforce, annual turnover, or asset base. For SME entrepreneurs, financial inclusion is pivotal to business sustainability, innovation, and growth, as it enhances access to financial capital needed for operational and strategic activities. In Niger State, Nigeria, despite national and regional policies aimed at improving financial inclusion, many SMEs still face difficulties in accessing formal financial services, primarily due to infrastructural, informational, and institutional limitations (Awojobi, 2023).

Financial technology (Fintech) has become a transformative tool in advancing financial inclusion, particularly for SMEs in developing regions. Fintech refers to the innovative use of technology to design and deliver financial services and products through digital platforms, mobile devices, and other electronic means (Ozili, 2023). It encompasses services such as mobile money, peer-to-peer lending, blockchain applications, and digital banking, all of which reduce physical, time, and bureaucratic barriers to financial access. The integration of Fintech in the Nigerian financial ecosystem presents a promising solution to bridging the financial gap experienced by SMEs in Niger State. However, the extent to which Fintech affects financial inclusion among SMEs remains underexplored, particularly concerning the behavioural and contextual factors that shape its adoption.

One critical proxy for Fintech adoption in this context is perceived risk, which refers to the SME entrepreneur's subjective expectation of potential losses when using digital financial services (Zhou, 2022). This includes concerns about fraud, data privacy, transaction errors, and system failures. High perceived risk may inhibit the willingness of entrepreneurs to engage with Fintech solutions, thereby limiting the overall impact on financial inclusion. Understanding how perceived risk affects financial inclusion is essential to developing targeted strategies that mitigate fears and encourage broader adoption.

Another essential proxy is agent trust, which reflects the degree of confidence SME entrepreneurs have in Fintech service agents or intermediaries, including mobile money

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

operators and banking correspondents (Asongu & Nwachukwu, 2023). Trust in agents is crucial in low-literacy and cash-dependent environments where personal interaction still plays a role in digital financial transactions. When trust in agents is low, entrepreneurs are less likely to engage in Fintech services, thus restricting their financial inclusion. Building and maintaining agent trust can foster user confidence and stimulate the adoption of financial technologies among SMEs.

The growing significance of Fintech in enhancing financial inclusion justifies an examination of perceived risk and agent trust as relevant proxies for understanding this relationship. Perceived risk captures the psychological and security concerns that can deter Fintech usage, while agent trust represents the interpersonal and reliability factors that promote or hinder adoption. By focusing on these variables, this study provides a nuanced understanding of how behavioural and relational dynamics affect the effectiveness of Fintech in promoting financial inclusion among SME entrepreneurs in Niger State. These insights are crucial for policymakers, Fintech developers, and financial service providers aiming to deepen financial access and empower local enterprises in underserved regions.

1.2 Statement of the Problem

Financial inclusion is a critical driver of sustainable growth for Small and Medium Enterprises (SMEs), particularly in developing economies where access to formal financial services can significantly affect business resilience, innovation, and competitiveness. For SME entrepreneurs, access to financial services enables capital formation, facilitates efficient transactions, and supports enterprise expansion (Awojobi, 2023). However, in Niger State, Nigeria, many SMEs continue to operate outside the formal financial sector due to persistent challenges such as poor infrastructure, limited digital literacy, and institutional weaknesses. Despite various government initiatives and policies promoting financial access, the desired level of financial inclusion among SMEs remains largely unmet, calling for a more nuanced investigation of technological enablers such as financial technology (Fintech) and the behavioural factors influencing its adoption.

Fintech innovations are widely regarded as powerful tools for expanding financial inclusion, especially among underserved populations. These technologies promise enhanced accessibility, reduced transaction costs, and more personalized financial services through digital platforms (Ozili, 2023). Behavioural factors such as perceived risk and agent trust have emerged as significant determinants of Fintech adoption,

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

influencing how SMEs engage with financial technologies. The level of risk perceived in digital financial transactions, ranging from fraud, data breaches, to system unreliability, can deter SME participation, thereby limiting Fintech's potential to drive inclusion (Frank, Tiago, & Carlos 2022; & Zhou, 2022). Similarly, the degree of trust placed in Fintech agents, particularly in low-trust environments like rural and semi-urban Niger State, can either facilitate or hinder financial engagement.

Several empirical studies have explored the relationship between Fintech and financial inclusion, yet notable gaps remain, particularly concerning how perceived risk and agent trust specifically affect SME entrepreneurs in localized Nigerian contexts. For instance, Senyo and Ellis (2020) investigated mobile money adoption using UTAUT2 and Prospect Theory in Ghana, finding that performance and effort expectancy significantly affect intention to use Fintech, while perceived risk had no significant impact. However, their focus on general mobile money users, rather than SME entrepreneurs, limits the applicability of their findings to the Nigerian SME sector. The lack of emphasis on trust dynamics, especially agent trust, leaves a gap in understanding trust-based constraints to financial inclusion in environments where face-to-face service interaction remains essential.

Similarly, Goswami, Sharma, and Chouhan (2022) analysed how Fintech affects entrepreneurial behaviour and financial inclusion in rural India. Their results emphasized the role of social effect and system usability, but failed to examine perceived risk and agent trust explicitly. While the study demonstrated the usefulness of structural equation modelling, it did not consider the contextual fears and interpersonal trust issues that are often critical in fragile economies like Nigeria. Moreover, by focusing on rural India, the study offers limited relevance for localized policy-making in Niger State, where cultural and infrastructural realities may differ substantially.

The study by Asif et al. (2023) directly addressed perceived risk and agent trust, finding them to significantly affect financial inclusion in India. However, this study lack of focus on SME-specific dynamics limits its generalizability to Nigerian SMEs. Although agent trust was shown to be critical, the absence of contextual validation in Nigeria's socio-economic and regulatory environment weakens the practical applicability of the findings.

Therefore, this study seeks to fill the identified gaps by empirically investigating the effect of perceived risk and the effect of agent trust on the financial inclusion of SME entrepreneurs in Niger State, Nigeria. These two proxies are well-suited to the Nigerian context, where financial infrastructure is evolving, and trust remains a vital component of

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

financial transactions. By focusing specifically on SME entrepreneurs and employing a localized approach, this study aims to generate insights that are both theoretically enriching and practically relevant for improving financial inclusion through Fintech adoption in Nigeria.

1.3 Objectives of the Study

Specifically, the study seeks to address the following research objectives:

i. Determine the effect of perceived risk on the financial inclusion of SMEs in Niger State, Nigeria.

ii. Evaluate the effect of agent trust on the financial inclusion of SMEs in Niger State, Nigeria.

1.4 Research Hypothesis

The following research hypotheses shall be tested:

$Ho_{1:}$ Perceived risk has no significant effect on the financial inclusion of SMEs in Niger State, Nigeria.

$Ho_{2:}$ Agent trust has no significant effect on the financial inclusion of SMEs in Niger State, Nigeria.

2.0 Literature Review

2.1 Concept of Financial Inclusion

Several scholars have recently defined financial inclusion as the access to and usage of affordable, useful, and responsible financial products and services that meet the needs of individuals and businesses, particularly those traditionally excluded from the formal financial system (Ozili & Arun, 2020; World Bank, 2021). It encompasses a broad range of services, including savings, credit, insurance, payments, and remittances, delivered through various channels (Cámara & Tuesta, 2017). Furthermore, it is viewed as a developmental imperative aimed at reducing poverty and inequality by empowering vulnerable populations to manage their financial lives and invest in their future (Sarma & Pais, 2011; United Nations, 2020). These definitions collectively highlight the multidimensional nature of financial inclusion, emphasizing not just access, but also usage, quality, and its socioeconomic impact.

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

While these definitions broadly agree on the core tenets of financial inclusion, some criticisms can be levelled. The emphasis on "affordable, useful, and responsible" products, while crucial, can be subjective and difficult to consistently measure across diverse contexts. For instance, what constitutes "affordable" in a developed economy might be prohibitive in a developing one. Moreover, the focus on "access and usage" sometimes overlooks the deeper structural barriers that prevent vulnerable groups from engaging with financial services, such as financial literacy gaps, lack of identification, or social discrimination (provide in-text source). Some definitions also tend to be more descriptive than prescriptive, offering little guidance on *how* to achieve comprehensive financial inclusion beyond simply providing access to services. The developmental imperative angle, while important, can sometimes overshadow the commercial viability and sustainability aspects for financial service providers (Ozili & Arun, 2020).

For this study, financial inclusion is adopted as the provision of access to and usage of affordable, useful, and responsible financial products and services, including savings, credit, insurance, payments, and remittances, that meet the needs of individuals and businesses, particularly those at the base of the pyramid, thereby enabling them to improve their financial well-being and participate more fully in the economy (World Bank, 2021).

2.2 Concept of Financial Technology

Several recent scholarly definitions converge on financial technology (FinTech) as the innovative application of technology to enhance, automate, or disrupt traditional financial services and operations (Plaid, 2025; McKinsey, 2024; World Bank, 2024). It encompasses a broad spectrum of digital advancements, including but not limited to mobile banking, online lending, digital payment systems, blockchain-based applications like cryptocurrencies, robo-advisors, and artificial intelligence, all aimed at improving efficiency, accessibility, and the user experience in the financial sector (Investopedia, 2024; Central Bank of Ireland, 2024). Fundamentally, FinTech represents a paradigm shift in how financial products and services are delivered, often by leveraging cutting-edge innovations to address existing pain points and cater to new market segments, including the financially underserved (Suryono et al., 2020; World Bank, 2024).

While these definitions broadly capture the essence of FinTech, they are not without criticism. Many definitions, despite acknowledging "innovation," sometimes struggle to clearly differentiate between mere technological upgrades within existing financial systems and truly disruptive innovations that fundamentally alter business models or

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

create entirely new services. The rapid evolution of FinTech also means that a definition can quickly become outdated as new technologies emerge and integrate into the financial landscape. Furthermore, some definitions tend to focus heavily on the technological aspect, potentially understating the crucial regulatory, social, and economic implications that arise from FinTech adoption. The emphasis on "improving financial activities" can also be ambiguous, as not all FinTech innovations universally improve outcomes for all stakeholders, and some may introduce new risks or exacerbate existing inequalities if not managed carefully.

For this study, financial technology (FinTech) is adopted as the application of innovative digital technologies, such as artificial intelligence, blockchain, and mobile computing, to create, enhance, or deliver financial products and services, aiming to improve efficiency, accessibility, and user experience for individuals and businesses (McKinsey, 2024; Plaid, 2025).

2.2.1 Perceived Risk

Perceived risk is a critical factor influencing the adoption and continued use of financial technology (FinTech). It refers to the uncertainties or potential negative consequences that individuals associate with engaging in FinTech services, including the risk of financial loss, security breaches, fraud, and violations of privacy (Asif et al., 2023). Users' perception of these risks shapes their confidence in digital financial platforms and their willingness to participate in such systems. While FinTech offers efficiency, accessibility, and innovation across services such as digital payments, lending, crowdfunding, and wealth management (Suryono et al., 2020; McKinsey, 2024; World Bank, 2024), the extent to which individuals adopt these services often depends on how safe they believe them to be.

A limitation of focusing exclusively on perceived risk is that it does not capture the full breadth of FinTech's technological innovations, such as artificial intelligence, blockchain, and robo-advisory systems. Even when users perceive FinTech as low-risk, adoption may remain constrained if the service does not provide sufficient functionality or value (Asif et al., 2023). Therefore, while perceived risk is a vital driver of user acceptance, it should be understood as one dimension of a broader framework that determines FinTech adoption.

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

2.2.2 Agent Trust

Agent trust represents the confidence users place in the intermediaries, whether human agents or digital platforms that facilitate access to FinTech services. It encompasses perceptions of competence, integrity, reliability, and fairness in financial transactions (Asif et al., 2023). Trust in agents is particularly significant in contexts with weak institutional frameworks or limited digital literacy, where users may rely more heavily on interpersonal assurances to engage with financial innovations.

Scholarly literature emphasizes that trust plays a pivotal role in reducing perceived uncertainties, thereby encouraging adoption and sustained usage of FinTech (Asif et al., 2023). However, as with perceived risk, reliance on agent trust alone may provide an incomplete view of FinTech adoption. While high levels of trust can promote engagement, adoption also depends on the functionality and usability of the underlying technology as well as the scope of services offered. Thus, agent trust should be regarded as an essential user-centric factor that complements, but does not fully substitute, the technological and structural dimensions of FinTech innovation.

2.3 Conceptual Model

This study proposes that Perceived Risk will have a direct effect on the financial inclusion of SMEs, with higher perceived risk leading to lower adoption and usage of FinTech services, thereby hindering financial inclusion. Similarly, Agent Trust is hypothesized to directly effect financial inclusion, where higher trust in agents and platforms will encourage greater engagement with FinTech services, consequently enhancing financial inclusion among SMEs. While FinTech is the overarching context of this study, the specific objectives indicate that Perceived Risk and Agent Trust are the direct drivers whose individual effects on financial inclusion are being examined.

The conceptual framework for this study is visually represented in Figure 1:

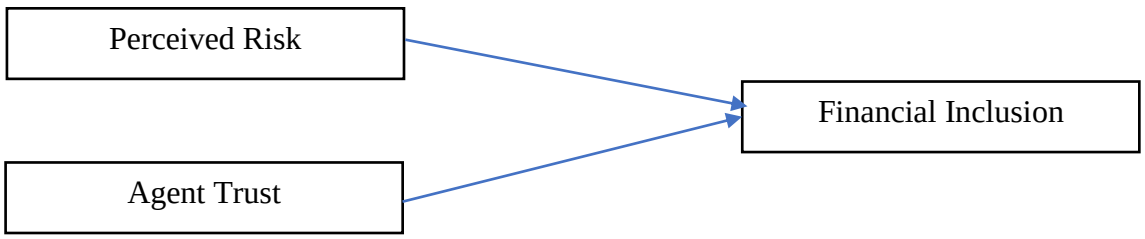

Figure 2.1: Relationship between Fintech and Financial Inclusion

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

This framework clearly illustrates the direct relationships investigated by the study's objectives. By focusing on perceived risk and agent trust, the research aims to provide insights into how these critical factors, stemming from the broader FinTech landscape, directly affect the extent to which SME entrepreneurs in Niger State can achieve and benefit from financial inclusion.

2.4 Empirical Review

Senyo and Ellis (2020) explored how developments in financial technology can promote financial inclusion by identifying the underlying factors that affect it. Their research emphasized that understanding these factors is essential for enhancing financial inclusion outcomes. To achieve this, they adopted Prospect Theory and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as the theoretical framework, focusing on mobile money as a FinTech innovation. The study analysed survey responses from 294 participants using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicated that performance expectancy and effort expectancy significantly affect users' intention to adopt mobile money services. Conversely, other variables such as perceived risk, price value, hedonic motivation, and social effect had no meaningful effect on the intention or actual use of mobile money. It is also important to note that the study relied on a non-probability sampling method, which may affect the generalizability of the results.

In the study conducted by Goswami, Sharma, and Chouhan (2022), the primary objective was to assess how technology can foster entrepreneurship and drive future adoption of financial technologies in developing countries. Employing a quantitative research methodology, the study tested hypotheses through inferential statistical techniques. Exploratory Factor Analysis (EFA) was used to identify key influencing factors, while Structural Equation Modelling (SEM) was applied to evaluate the impact of FinTech on financial inclusion in rural India. The findings revealed that behavioural intention to adopt FinTech was positively affected by factors related to social effects. Moreover, the behavioural intention was significantly linked to perceived ease of use and habitual use of financial technology. System usability was also found to have a strong positive relationship with the determinants of perceived ease of use.

Asif et al. (2023) conducted a study to examine the effect of financial technology and digital financial services on financial inclusion in the Indian context. The study employed both survey and quantitative research designs. Although the method for determining the

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

sample size was not detailed, the total number of respondents included in the study was 400. A non-probability sampling method was used to select participants. The researchers utilized Partial Least Squares Structural Equation Modelling (PLS-SEM) to evaluate the proposed hypotheses. Results indicated that agent trust, service charges, and service trust had a substantial effect on financial inclusion. Additionally, perceived risk emerged as a significant factor influencing financial inclusion. The study also found that behavioural intention to use FinTech products and social effect played important roles. Among all the variables examined, usability stood out as the most influential factor impacting financial inclusion.

2.5 Theoretical Framework

This study on the effect of perceived risk and agent trust on the financial inclusion of SME entrepreneurs in Niger State is underpinned by two primary theoretical frameworks: the Technology Acceptance Model (TAM) and the Trust Theory. These theories provide robust lenses through which to understand user adoption of new technologies and financial services, particularly in contexts involving digital interactions and potential uncertainties.

2.5.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), originally proposed by Davis (1989), is a widely used theoretical framework for explaining and predicting user acceptance of information technology. TAM posits that two key beliefs, Perceived Usefulness and Perceived Ease of Use, are fundamental determinants of an individual's attitude toward using a system, which in turn affects their behavioural intention to use, and ultimately, actual system usage. Perceived Usefulness refers to the degree to which a person believes that using a particular system would enhance their job performance. Perceived Ease of Use, on the other hand, refers to the degree to which a person believes that using a particular system would be free of effort.

While the original TAM focuses on usefulness and ease of use, subsequent research has extended the model to incorporate external variables that affect these core beliefs (Venkatesh & Davis, 2000). In the context of FinTech adoption, factors like perceived risk often act as external variables that can significantly dampen perceived usefulness or ease of use, or directly impact behavioural intention (Baabdullah et al., 2023; Dwivedi et al., 2023). Therefore, this study leverages the extended TAM framework to integrate Perceived Risk as a critical external variable. A high perceived risk associated with FinTech services (e.g., concerns about security of funds, data privacy) can directly reduce

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

an SME entrepreneur's intention to adopt them, even if the services are perceived as useful or easy to use. This aligns with recent findings that security and privacy concerns are significant barriers to FinTech adoption (KPMG, 2024; EY Global FinTech Adoption Index, 2023).

2.5.2 Trust Theory

Trust Theory provides a foundational understanding of how individuals form expectations about the behaviour of others, especially in situations involving uncertainty and vulnerability. In the context of financial services, particularly digital ones, trust is paramount. Mayer, Davis, and Schoorman (1995) defined trust as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party. This definition highlights key dimensions of trust, including ability (competence), benevolence (goodwill), and integrity (honesty).

For SME entrepreneurs interacting with FinTech, trust extends beyond the technology itself to the human elements and institutions involved. Agent Trust, as a specific application of Trust Theory, is crucial when FinTech services are delivered or facilitated through human agents (e.g., mobile money agents) or when interacting with new, less familiar digital platforms and their providers. The willingness of an SME entrepreneur to deposit funds, take out a digital loan, or make payments through an unfamiliar FinTech platform or agent heavily relies on their trust in the competence of the technology, the integrity of the platform provider, and the benevolence of the human agent (Chen & Chen, 2024). Lack of trust, often stemming from concerns about fraud, unreliable service, or unresponsiveness, is a significant barrier to the uptake of financial services, particularly among vulnerable populations and SMEs (Deloitte, 2024; World Bank, 2023). Therefore, Trust Theory provides the theoretical basis for understanding how agent trust directly affects SME entrepreneurs' decisions to engage with FinTech services, thereby impacting their financial inclusion.

By integrating TAM and Trust Theory, this study comprehensively examines how psychological factors (perceived risk from TAM) and relational factors (agent trust from Trust Theory) collectively shape the adoption and continued use of FinTech services by SME entrepreneurs, ultimately influencing their financial inclusion.

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

3.0 Methodology

This study used quantitative survey research designs. According to the Report of Niger State Small, Medium Enterprises and Micro finance Agency (2021), Niger state has 454,000 SME entrepreneurs. This population constitutes the targeted population of the study. The sample size is 400 as determined by the sample size estimation formula of Taro Yamane (1973). However, to provide for non-response rate, 10% of the determined sample size was added to arrive at a working sample size of 440. The sample size was selected using the Purposive sampling technique. The study adopted a structured questionnaire to collect primary data. Out of the 440 copies of the questionnaire distributed, 348 copies of the questionnaire were found appropriate for data analysis. The study used multiple linear regression for data analysis with the aid of SPSS Version 27.

The independent variable was measured using two determinants: perceived risk and agent trust. The perceived risk scale is made up of 5 items adapted from the works of Asif et al. (2023), Goswami *et al.* (2023); and Senyo, and Ellis (2020). The agent trust scale is made up of 5 items adapted from the works of Senyo, and Ellis' scale is also made up of 5 items and adapted from the works of Goswami *et al.,* (2023); Asif et al. (2023).

Table 1 shows the result of Cronbach's alpha reliability test. Perceived Risk scale is reliable by 76.6%, Agent Trust scale is reliable by 88.8%, and Fintech use for Financial Inclusion scale is reliable by 87%. This result indicates that all the study variables are reliable (Zach, 2021; & Fawad 2021).

Table 1. Reliability Test

Variable	Number of items	Scale reliability coefficient
Perceived Risk	5	.766
Agent Trust	5	.888
Fintech use for Financial Inclusion	5	.870

Source: Field survey, 2025

The study used multiple linear regression to analyse data at 5% level of significance. Any p – p-value above 0.05 means the model has no significant effect, and such, the null hypothesis is not rejected or otherwise rejected, and the alternate hypothesis is accepted and vice versa. The data analysis was aided through the use of Statistical Packages for Social Sciences (SPSS 27). The regression model is in line with the study of Asif *et al.*, (2023), which is given below:

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

$$FI = \beta_0 + \beta_1 PR_i + \beta_2 AT_i + e_i$$

Where:

FI –financial inclusion; β_0 = constant; $\beta_1 PR_i$ = Perceived Risk coefficients; $\beta_2 AT_i$ = Agent Trust coefficients; e - error term.

4.0 Data Analyses and Discussion

4.1 Normality Test

The study employed the values of skewness and kurtosis to assess the normality of the data, which is a crucial assumption for many parametric statistical analyses. For a distribution to be considered normal, its skewness and kurtosis values should ideally be close to zero. In practice, common rules of thumb suggest that skewness values between -2 and +2 and kurtosis values between -7 and +7 are considered acceptable to assume a normal univariate distribution (George & Mallery, 2010; Hair et al., 2010; Bryne, 2010). Values falling outside these ranges indicate a significant departure from normality.

Table 2 **Normality Test**

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Perceived Risk	348	16.04	3.746	-.661	.131	.266	.261
Agent Trust	348	17.95	2.814	-2.249	.131	6.198	.261
Financial Inclusion	348	22.30	2.981	-1.615	.131	2.785	.261
Valid N (listwise)	348						

The table above presents the normality test results for the key variables: Perceived Risk, Agent Trust, and Financial Inclusion, based on a sample of 348 SME entrepreneurs in Niger State. For Perceived Risk, both its skewness (-0.661) and kurtosis (0.266) fall well within the -2 to +2 and -7 to +7 acceptable ranges, respectively, indicating its distribution is acceptably normal. Similarly, Financial Inclusion shows a skewness of -1.615 and a kurtosis of 2.785, both well within their respective thresholds, meaning its distribution is also acceptably normal. For Agent Trust, the skewness value is -2.249. While this value is slightly beyond the -2 lower bound, it still achieved a reasonable threshold; its kurtosis of 6.198 is comfortably within the -7 to +7 range. Therefore, based on a broad interpretation of the specified thresholds, all constructs' distributions are considered sufficiently normal for the study's subsequent parametric analyses, leveraging the robustness of such tests with a large sample size (N=348).

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

4.2 Collinearity Analysis

Collinearity analysis is crucial in multiple regression to detect multicollinearity, a phenomenon where independent variables are highly correlated with each other. High multicollinearity can inflate the variance of regression coefficients, making them unstable and difficult to interpret. This study assessed collinearity using Tolerance and Variance Inflation Factor (VIF) values. Generally, Tolerance values should be greater than 0.1 (or preferably 0.2), and corresponding VIF values should be less than 10 (or preferably less than 5) to indicate an absence of problematic multicollinearity (Hair et al., 2010; Pallant, 2020).

Table 3 **Collinearity Statistics**

		Tolerance	VIF
1	(Constant)		
	Perceived Risk	.967	1.034
	Agent Trust	.967	1.034

a. Dependent Variable: Financial Inclusion a. Dependent Variable: Financial Inclusion

The table above presents the collinearity statistics for the independent variables, Perceived Risk and Agent Trust, in relation to the dependent variable, Financial Inclusion. Both Perceived Risk and Agent Trust exhibit a Tolerance value of 0.967. This value is well above the common threshold of 0.1 (and even 0.2), indicating a high degree of independence between these variables. Consequently, their VIF values are 1.034, which is significantly less than the threshold of 10 (and even less than the more stringent threshold of 5). These results confirm that there is no issue of multicollinearity among the independent variables in this study. This means that Perceived Risk and Agent Trust are not overly correlated with each other, ensuring that their individual effects on Financial Inclusion can be reliably estimated and interpreted in the regression model.

4.3 Model fit

Table 4 shows the result of the study model summary.

Table 4 **Model Summary[b]**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.190[a]	.036	.030	2.936	1.993

a. Predictors: (Constant), Agent Trust, Perceived Risk

b. Dependent Variable: Financial Inclusion

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

The table above presents the model fit statistics for the regression analysis, with Perceived Risk and Agent Trust as predictors of Financial Inclusion. The R value is 0.190, indicating a weak positive linear relationship between the combined independent variables and Financial Inclusion. The R Square value is 0.036, meaning that approximately 3.6% of the variance in Financial Inclusion can be explained by Perceived Risk and Agent Trust. The Adjusted R Square is 0.030, suggesting that when generalized to the population, the predictors account for about 3.0% of the variance in Financial Inclusion. This low R-squared value implies that Perceived Risk and Agent Trust, while perhaps significant predictors, explain a relatively small proportion of the variability in financial inclusion among SME entrepreneurs in Niger State, suggesting other factors not included in this model might play a larger role. Finally, the Durbin-Watson statistic is 1.993, which is very close to the ideal value of 2 and falls well within the acceptable range of 1.5 to 2.5. This indicates that there is no significant autocorrelation among the residuals, satisfying an important assumption of linear regression.

4.4 ANOVA

Table 5 shows the result of the study ANOVA.

Table 5 **ANOVA[a]**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	111.089	2	55.544	6.445	.002[b]
	Residual	2973.426	345	8.619		
	Total	3084.514	347			

a. Dependent Variable: Financial Inclusion
b. Predictors: (Constant), Agent Trust, Perceived Risk

The ANOVA table for Model 1, with Financial Inclusion as the dependent variable and Agent Trust and Perceived Risk as predictors, indicates the overall statistical significance of the regression model. The F-statistic is 6.445, with degrees of freedom (df) of 2 for the regression and 345 for the residual. The corresponding Significance (Sig.) value is 0.002. Since this p-value (0.002) is less than the conventional significance level of 0.05, it indicates that the regression model is statistically significant. This means that, as a group, Perceived Risk and Agent Trust significantly predict Financial Inclusion among SME entrepreneurs in Niger State. In other words, the linear combination of these two independent variables contributes significantly to explaining the variance in Financial Inclusion, confirming that the model is a better predictor than merely using the mean of the dependent variable.

WEST AFRICA DYNAMIC JOURNAL OF HUMANITIES, SOCIAL AND MANAGEMENT SCIENCES AND EDUCATION: DEPARTMENT OF COMMUNICATIONS, UNIVERSITY OF CAPE COAST, GHANA
Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

4.5 Test of Hypotheses

Table 6 shows the results of the study's regression.

Table 6 **Coefficients[a]**

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	25.716	1.134		22.685	.000
	Perceived Risk	-.131	.043	-.164	-3.057	.002
	Agent Trust	-.074	.057	-.070	-1.293	.197

a. Dependent Variable: Financial Inclusion

The results for Perceived Risk indicate a statistically significant negative effect on financial inclusion. The unstandardized coefficient (B) is -0.131, meaning that for every one-unit increase in perceived risk, financial inclusion is expected to decrease by 0.131 units, holding agent trust constant. The standardized beta coefficient is -0.164, showing that perceived risk has a relatively weak, but notable, negative impact. The t-statistic is -3.057, with a corresponding p-value (Sig.) of 0.002. Since this p-value (0.002) is less than the conventional significance level of 0.05, it confirms that perceived risk is a statistically significant predictor of financial inclusion among SME entrepreneurs in Niger State. This supports the notion that higher perceived risks deter financial inclusion. With this result, the null hypothesis is therefore rejected and the alternative accepted. This result aligns with the findings of Asif et al. (2023), who also reported a significant inverse relationship between perceived risk and the adoption of fintech services in developing economies. Their study emphasized that mistrust in financial technology, particularly among small business owners, undermines confidence and restricts participation in formal financial systems. Conversely, this finding contradicts the conclusions of Senyo and Ellis (2020), who found that perceived risk did not significantly affect digital financial service adoption. Their study argued that once users become accustomed to technology and observe consistent system reliability, their perception of risk becomes negligible.

Regarding agent trust, the results show a negative but statistically non-significant effect on financial inclusion. The unstandardized coefficient (B) is -0.074, suggesting that for every one-unit increase in agent trust, financial inclusion is expected to decrease by 0.074 units, holding perceived risk constant. The standardized beta coefficient is -0.070, indicating a very weak negative relationship. The t-statistic is -1.293, with a corresponding p-value (Sig.) of 0.197. As this p-value (0.197) is greater than the conventional significance level of 0.05, it indicates that agent trust is not a statistically significant predictor of financial inclusion in this model for SME entrepreneurs in Niger State. This implies that while there's a slight negative trend observed, the level of trust in agents does not reliably predict the extent of financial inclusion within this sample. With

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

this result, the null hypothesis is therefore not rejected. This finding is contrast to the finding of Asif et al. (2023).

5.1 Conclusion

Conclusively, the paper investigated the effect of financial technology (through perceived risk and agent trust) on the financial inclusion of SME entrepreneurs in Niger State, The analysis confirmed that Perceived Risk has negative effect on Financial Inclusion, indicating that higher perceived risks among SME entrepreneurs hinder their financial inclusion. Conversely, Agent Trust was found to have no statistically significant effect on Financial Inclusion within this study's framework. These findings suggest that while addressing perceived risks is crucial for enhancing financial inclusion among SMEs, the role of agent trust, as measured, does not significantly contribute to its variation in this context, implying other factors might play a more dominant role.

5.2 Recommendations

The following recommendations are put forward based on the study's findings:

- Since the study established that perceived risk has a significant and negative effect on the financial inclusion of SME entrepreneurs in Niger State, deliberate efforts should be made to reduce these risks. FinTech providers, policymakers, and regulators should invest in robust cybersecurity infrastructure and enforce transparent data privacy policies for digital financial services.

- Additionally, extensive awareness campaigns should be organized to educate SME entrepreneurs on the security features of FinTech platforms, fraud detection, and available redress mechanisms.

- Simplifying the user interface and strengthening customer support services will also help reduce perceived complexity and build confidence, thereby enhancing SMEs' willingness to adopt and sustain the use of FinTech tools.

- Although agent trust did not emerge as a statistically significant predictor of financial inclusion in this study, it remains an important aspect of the broader FinTech adoption ecosystem. It is recommended that stakeholders should adopt a multi-faceted approach to financial inclusion that goes beyond agent trust. Future research should explore other potential drivers, such as institutional trust, trust in digital platforms, financial literacy, affordability of FinTech products, regulatory support, and infrastructure availability.

- Policy interventions should therefore focus on creating a supportive ecosystem that addresses both technological and non-technological barriers. By doing so, SME entrepreneurs will have increased confidence in engaging with FinTech services, which in turn will promote deeper and more sustainable financial inclusion.

References

Asif, M., Khan, M. N., Tiwari, A., Showkat K. Wani, A. K., &Alam, F. (2023). The impact of fintech and digital financial services on financial inclusion in India. *Journals Risk Financial Management*. 16(2), 122- 137. https://doi.org/10.3390/jrfm16020122

Asongu, S. A., & Nwachukwu, J. C. (2023). Trust in financial institutions and financial inclusion in sub-Saharan Africa. *Journal of African Business, 24*(1), 1–17.

Awojobi, O. N. (2023). Financial inclusion of small and medium enterprises in Nigeria: Challenges and prospects. *Journal of African Financial Studies, 15*(1), 45–60.

Awojobi, O. N. (2023). Financial inclusion of small and medium enterprises in Nigeria: Challenges and prospects. *Journal of African Financial Studies, 15*(1), 45–60.

Baabdullah, A. B., Al-Sallami, F. M., & Al-Amri, S. M. (2023). Factors influencing fintech adoption among SMEs: An extended technology acceptance model. *Journal of Financial Services Marketing, 28*(1), 1-19.

Bryne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge.

Cámara, N., & Tuesta, D. (2017). Measuring financial inclusion: A new multidimensional index. *BBVA Research Working Paper*, (17/02).

Central Bank of Ireland. (2024). *What is fintech and how is it changing financial products*. Retrieved from https://www.centralbank.ie/consumer-hub/explainers/what-is-fintech-and-how-is-it-changing-financial-products

Chen, I. J., & Chen, Y. C. (2024). The role of trust in digital finance adoption: A meta-analysis. *International Journal of Electronic Commerce Studies*, *15*(1), 1-20.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340.

Deloitte. (2024). *Trust in Banking: Building Customer Loyalty in a Digital Age*. Retrieved from [While specific URL changes, this is a common annual report. Search for "Deloitte Trust in Banking 2024"]

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2022). *The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank Group.

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2023). Re-examining the technology acceptance model: A meta-analysis of past research and directions for future research. *Journal of Enterprise Information Management*, *36*(1), 154-192.

EY Global FinTech Adoption Index. (2023). *The EY Global FinTech Adoption Index 2023*. Retrieved from [While specific URL changes, this is a common annual report. Search for "EY Global FinTech Adoption Index 2023"]

Fawad (2021, November 26). *SPSS Data Analysis | Cronbach Alpha Reliability - Analysis, Interpretation*. [Video file]. Received from https://m.youtube.com/watch?v=UAlse6IW5EY

Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.). SAGE Publications.

Frank F., Tiago, O., & Carlos, T. (2022). Continuance Intention of Mobile Payment: TTF Model with Trust in an African Context. *Information Systems Frontiers*, 25(2). 1-13. 10.1007/s10796-022-10263-8.

George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 Update* (10th ed.). Pearson.

Goswami, S., Sharma, R. B., &Chouhan, V. (2023). Impact of Financial Technology (Fintech) on Financial Inclusion (FI) in Rural India. *Universal Journal of Accounting and Finance*, 10(2), 483 - 497. DOI: 10.13189/ujaf.2022.100213.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall.

Investopedia. (2024). *Financial Technology (Fintech): Its Uses and Impact on Our Lives*. Retrieved from https://www.investopedia.com/terms/f/fintech.asp

KPMG. (2024). *Pulse of Fintech H2'23*. Retrieved from [While specific URL changes, this is a common biannual report. Search for "KPMG Pulse of Fintech H2 2023"]

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, *20*(3), 709–734.

McKinsey. (2024). *What is fintech (financial technology)?* Retrieved from https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-fintech

Niger State Small, Medium Enterprises and Microfinance Agency (NSSMEMA) (2021). 454,000 MSMEs now operating in our state: Niger Govt. Retrieved from https://gazettengr.com/454000-msmes-now-operating-in-our-state-niger-govt/

Volume 6, Number 1, January-December 2025 **ISSN**: 2955-0556
Email: wajghana2080@gmail.com

Ozili, P. K. (2023). Financial technology and financial inclusion: A comparative analysis. *Journal of Financial Innovation and Regulation, 5*(2), 123–140.

Ozili, P. K. (2023). Financial technology and financial inclusion: A comparative analysis. *Journal of Financial Innovation and Regulation, 5*(2), 123–140. Zhou, T. (2022). Understanding mobile payment continuance: The role of perceived risk and trust. *Information Development, 38*(3), 456–465.

Ozili, P. K., & Arun, T. G. (2020). Financial inclusion in Nigeria: A review of policies and issues. *International Journal of Social Economics, 47*(1), 143-160.

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (7th ed.). Routledge.

Plaid. (2025, April 24). *What is fintech? 6 main types of fintech and how they work*. Retrieved from https://plaid.com/resources/fintech/what-is-fintech/

Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, *23*(1), 162-173.

Senyo P. K., &, Ellis, L.C. O. (2020). Unearthing antecedents to financial inclusion through FinTech innovations. Retrieved from *https://doi.org/10.1016/j.technovation.2020.102155*

Suryono, R. R., Budi, I., & Purwandari, B. (2020). Challenges and trends of financial technology (fintech): A systematic literature review. *Information, 11*(12), 590.

United Nations. (2020). *Financial inclusion for sustainable development*. United Nations.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, *46*(2), 186–204.

World Bank. (2021). *The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank.

World Bank. (2023). *Financial Inclusion in the Digital Age: Challenges and Opportunities*. World Bank.

World Bank. (2024). *Fintech*. Retrieved from https://www.worldbank.org/en/topic/fintech

Zach (2021). How to Report Cronbach's Alpha (With Examples). Retrieved from https://www.statology.org/how-to-report-cronbachs-alpha/

Zhou, T. (2022). Understanding mobile payment continuance: The role of perceived risk and trust. *Information Development, 38*(3), 456–465.