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The Effects of Financial Education on the Adoption of Financial Technology (FinTech) Services in the Buea Silicon Mountain Community of Cameroon

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Abstract

This paper sought to assess the effects of financial education on the adoption of financial technology (FinTech) services within the Buea Silicon Mountain community of the south region of Cameroon. A total of three hundred individuals were purposively sampled and data was collected through the use of structured questionnaires guided by parameters as observed in the Technology Adoption Model (TAM). Hypotheses were tested using the CB-SEM technique with analytical packages including SPSS 24 and AMOS 23. The findings revealed limited utilization of online banking and peer-to-peer lending platforms, with cryptocurrency exchanges and crowd-funding platforms ranking as the least utilized instruments. Additionally, the study establishes a significant influence of both financial knowledge and financial behaviour on the adoption of FinTech services. Individuals who comprehend the financial benefits of FinTech and perceive these services as innovative solutions are more likely to adopt them. This positive attitude is driven by the perceived ease of use, transaction tracking, and the potential to generate income through FinTech solutions. However, this paper did not find any statistically significant effect of financial skills on the adoption of FinTech services. Therefore, financial knowledge and a positive attitude toward FinTech services emerged as pivotal factors positively influencing financial services adoption in the Buea Silicon Mountain community of Cameroon.

Keywords: financial education, financial technology, buea, silicon mountain, financial knowledge, financial skills, adoption

1. Introduction

Despite the increasing popularity of Financial Technology (FinTech), a substantial number of individuals still lean towards traditional financial services, and in some cases, are not even aware of the existence of FinTech (Moufakkir & Mohammed, 2021). Given the escalating demand for financial services in both developed and developing economies, the adoption of FinTech is crucial for enhancing financial inclusion and promoting financial literacy (Bernards, 2019). FinTech is a notable invention within the finance industry. As highlighted by Hosen et al. (2023), the potential of FinTech to revolutionize the financial sector by offering convenience and security in financial transactions has garnered significant recognition. Bernards (2019) suggests a growing trend of household activities migrating to FinTech platforms, where a few mobile apps can provide the facilitation and convenience that replace traditionally time-consuming and high-qualification financial services, effectively meeting consumers' economic needs. FinTech is a broad term and applies to many innovations such as Insurance Technology (InsurTech), Regulation Technology (RegTech), Robo Advisers and Advertising Technology (AdTech). FinTech has emerged as a buzzword in the financial sector, propelled by several factors such as technological advancements, market-driven business innovation, cost-efficiency needs, and evolving customer requirements. Murinde et al. (2022) stated that FinTech has become a key investment focus for many leading financial institutions. According to Gai et al. (2018), FinTech is a novel technology used in the financial services industry. Meanwhile Bureshaid et al. (2021) opined that FinTech is the marriage of finance and information technology. These FinTech technologies are rapidly changing the operandi of how clients of financial institutions and the general population shop, save, borrow, and make other financial decisions (Feyen et al., 2021). Payment technologies like debit cards and mobile money which enable consumers to make retail payments and transfers through a bank account or mobile phone can benefit both the demand and supply sides of the market (Demirguc-Kunt et al. 2015). These changes have significant advantages for both the demand and supply sides of the market. With these changes, consumers are benefiting in terms of greater convenience, security, and affordability unlike in the traditional banking approach. These FinTech services bring more financial inclusion to all (Demirguc-Kunt et al. 2017). For example, consumers can use digital payments to make purchases online or in stores without having to carry cash around. Digital payments are also often more secure than traditional methods of payment, such as cash or checks. Additionally, many digital payment providers offer low or no fees for transactions (Barroso & Laborda, 2022). According to the World Bank (2022), digital payments can help businesses process transactions more quickly and easily. The World Bank (2022) also states businesses can sell digital products or services through their websites or mobile apps, generating new revenue streams. Bachas et al. (2021) added that consumers benefit from financial technologies through lower transaction costs, such as the costs of traveling to a bank branch or ATM to withdraw cash. Irrefutably, FinTech services, particularly Mobile Money technology, have revolutionized the financial landscape in sub-Saharan African countries,

triggering socio-economic transformations. In 2021, the region saw a 12% year-over-year increase in registered mobile money users, reaching a staggering 548 million. These users conducted transactions worth US$490 billion, totaling 27.4 billion transactions (GSM Association, 2021). According to Talom & Tengeh (2020), in Cameroon, apart from households, Small and Medium-sized Enterprises (SMEs) have greatly benefited from FinTech services like mobile money transfer and receipt services. They stated that these services have accounted for approximately 73% of the total variance in the turnover of SMEs in Douala since they adopted the technology. The 2019 GSMA Mobile Connectivity Index reported that a vast majority (96%) of Cameroon's population has access to a mobile GSM network (2G and above). This widespread access positions Cameroon as a strong contender for continuous exploration of Financial Innovation services like Mobile Money to further accelerate financial inclusion (Ndassi et al., 2023). However, with the increase in the number of available financial products and their growing complexity, there is a corresponding need for clients to enhance their knowledge, attitudes, and skills to utilise these FinTech services and make informed financial decisions effectively (Vlaev et al., 2007). This underscores the necessity for adequate financial literacy. Financial education plays a key role in adopting FinTech services like MoMo, crowd lending, and savings using apps and virtual currency such as cryptocurrencies (Meiryani et. al., 2022). It equips individuals with the necessary knowledge and skills to understand and effectively utilize these innovative financial services. The different dimensions of financial education - knowledge, attitudes, and behaviours - are all critical in this context. The Buea Silicon Mountain Community in Cameroon has witnessed a surge in the introduction of FinTech applications such as Bohikor and Nkwa. Also, companies like Orange and MTN have seen consistent growth in the usage of their Mobile Money (MoMo) apps. That notwithstanding, the effects of financial education on the adoption of FinTech services is a pressing issue that warrants attention and research. Unfortunately, there exists scanty scientific evidence of the availability of literature on this subject in Cameroon specifically in Buea. There is a need to develop and implement targeted financial education programs that are specifically designed to meet the needs of the local population in Buea. Based on the aforementioned, this study is guided by the following specific objectives: to assess the effect of Financial knowledge on the adoption of FinTech services in the Buea Silicon Mountain community of Cameroon, to evaluate the extent to which Financial attitude/behaviour influences the adoption of FinTech services, to examine the effect of financial skills on the adoption of FinTech services in the Buea Silicon Mountain community of Cameroon. The study is significant in the areas of policy formulation regarding financial education and facilitating the adoption of financial technology.

2. Literature Review

2.1 The Concept of Financial Education

Financial education is commonly defined as the process by which financial consumers and investors improve their understanding of financial products, concepts, and risks (Lusardi, 2019).

According to him, it is a means through which information, instruction, or objective advice can be obtained. Financial knowledge, as discussed (Lusardi, 2019), plays a vital role in fostering the competencies and assurance required to navigate financial risks and seize opportunities. It equips individuals with the discernment to make educated decisions, identify resources for assistance, and undertake strategic measures to elevate their financial stability. Similarly, Aren & Dinç Aydemir, (2014) consider financial education as the process by which financial consumers and investors acquire the skills, knowledge, and assurance to make informed financial decisions. They assert that financial education encompasses the ability to understand financial products and services, assess and manage risks, and make sound financial choices.

Financial education is not only about imparting information and understanding regarding the features and risks associated with financial products but also about improving financial attitudes and behaviour. A study by Zeqiraj et al. (2022) found that financial education is a significant driver of financial inclusion in developing countries. They argued that financial education can help people to understand and utilize financial services more effectively, and also get rid of financial challenges. According to them, financial education has a high potential to create a healthy economic environment and certainly increases the formality of financial markets.

Financial education serves as a relevant supplement to regulating and supervising the financial system. Therefore, the validity of financial education cannot be overemphasized as it plays a pivotal role in enhancing the effectiveness of regulatory tools that oversee the transparency and informational responsibilities of financial institutions. This, in turn, facilitates the smoother functioning of financial markets (Ramachandran, 2013). Moreover, consumers who are well-versed in financial services can make informed choices about financial products that best suit their risk tolerance and requirements. This informed decision-making process contributes to the overall stability of the financial system(Sconti, 2022). With proper financial education, there is a balance of operations among the different operators in the financial industry: consumers, banks, and other financial institutions like Fintech and the financial regulators. This is achieved through heightening awareness around risks and promoting financial inclusion (Bashir & Qureshi, 2022).

Financial literacy, as defined by the OECD (Organisation for Economic Co-operation and Development, 2020), is a multifaceted concept that comprises awareness, knowledge, skills, attitudes, and behaviours that are essential for making wise financial decisions and achieving personal financial well-being. This concept aligns with Huston's (2010) view that financial literacy is an individual's ability to comprehend and apply financial information effectively. This includes the capacity for both short-term and long-term financial planning, taking into account life events and economic fluctuations.

2.2 The Concept of Financial Knowledge

Financial knowledge encompasses several aspects that vary by profession. Hasler and Lusardi

(2017) opined that basic aspects such as simple and compound interest, risk diversification, risk and return, and inflation form the basis of financial knowledge that are necessary to handle money efficiently and make informed choices about finance. Sanderson (2015) posited that financial knowledge is necessary for managing financial resources. He said that these skills should be taught in schools to provide understanding to students and adolescents. Stolper and Walter (2017) emphasise the role of financial knowledge as a significant indicator of positive predictor of future financial results or outcomes. Hence, enhancing financial literacy is crucial for individuals to navigate the increasing complex financial landscape effectively. Braunstein & Welch (2002) on their study noted that modern financial services, bank deposits, loans and credit products as well as retirement products are essential tools to understand which only comes from financial knowledge. In addition, the correct usage of credit cards is a basic component of financial knowledge (Lyons et al., 2007). Elsewhere, the Jumstart Coalition for Personal Financial Literacy stated that K–12 students should acquire financial knowledge, learn financial responsibility and decision making. This included but not limited to decisions concerning income and occupation money management and planning, credit and loans, risk management, insurance, savings as well as investment. (Jumptart, 2007). Also, Hasan et al., (2023) further supported the relevance of Fintech services adoption as they found that traditional market returns during war are far lower compared to Fintech markets the case of Russia-Ukraine war than before the war. This further supports the need for Fintech adoption in Buea Silicon Community that has suffered from the Anglophone crisis for over 6 years.

2.3 Theoretical Literature Review

This paper was povited on two theories that guided the study which are:

2.3.1 Theory of Reasoned Action (Fishbein & Ajzen, 1975)

The Theory of Reasoned Action (TRA) was first introduced by Fishbein in 1967. TRA asserts that the most important determinant of a person's behaviour is that person's behavioural intention. According to the theory this behavioural intention is comprised of subjective norms and attitude associated with the behaviour. Fishbein & Ajzen (1975) and Ajzen & Fishbein (1980) extended TRA to suggest that a person's behaviour is determined by their intention to perform the behaviour and that; this intention is in turn a function of their attitude toward the behaviour and subjective norms. This theory aims to explain the relation between attitude and behaviour within human action.

2.3.2 Technology Acceptance Model (TAM) (Davis, 1986)

The TAM as proposed by Davis in 1986, is an adaptation of TRA. According to Lai (2017), TAM is tailored for modelling users' acceptance of information systems or technologies. To investigate how users adopt FinTech services. Hu et al. (2019) proposed an improved TAM that includes: user innovativeness, government support, brand image, and perceived risk as determinants of trust. They proved that users' trust in FinTech services has a very significant influence on attitudes toward adoption, while perceived ease of use and perceived risk do not

affect it. Nangin et al. (2020) found that perceived ease of use had a positive effect on customer trust. The evolution of TAM was confirmed and recognized by studies on technology adoption (King & He, 2006; Weng et al., 2018). The relevance of TAM to this study is that it helps explain the effects of financial education on FinTech adoption. The model is a good foundation for creating a new web portal, especially in the B2B area of services industries.

2.4 Hypotheses Development

2.4.1 Financial Literacy, Financial Behaviour and FinTech Adoption

Wilkins et al., (2022) stated that lack of financial knowledge by households contributed significantly to the 2008 financial crisis, this suggests that awareness and understanding of financial products will affect decisions about whether or not to use that product. This was further supported by Cupák et al., (2020) who stated that financial behaviour is positively influenced by the level of financial knowledge The study examined consumer finance micro-data and evaluated the influence of self-assuredness in personal financial knowledge, confidence in the economy, and objective financial literacy on investments in risky financial assets like equity and bonds, across both broad and narrow margins. This was done while considering a wide range of covariates, including risk aversion. The findings revealed a positive link between financial literacy and investments in risky assets and debt securities. Additionally, confidence in one's financial skills increases the chances of holding risky assets and bonds. These relationships were quite strong for the broad margin, but they fell apart when considering the conditional proportion of financial wealth in risky assets among those who own them. The importance of financial literacy and confidence varied greatly with wealth distribution and across different socio-economic dimensions such as age, education, and race. Individuals with higher financial literacy may have lower fixed costs associated with acquiring and processing financial information than those with lower financial literacy, which would make it easier for the former to participate in risky financial activities. Van Rooij et al. (2011) show that financial literacy has a positive correlation with investment in stocks. According to Morgan, Huang, and Trinh (2019), in addition to the traditional risks of using financial services, there are additional risks when one uses digital financial services. Such risks are more diverse and harder to spot than those associated with traditional financial products and services, including phishing, pharming, spyware, and SIM card swaps. Digital footprints may also be a source of risk. This suggests that higher financial literacy could also facilitate the use of Fintech products and services, although we are not aware of any studies on this topic.

Findings from Van Rooij et al. (2011) and Xiao and O'Neil (2018) uncovered the place of behavioural attitudes in shaping an individual's financial decisions. Concurrently, Hsiao and Tsai (2018) argued that the decision to partake in financially risky behaviours hinges predominantly on the perceived costs and benefits of information acquisition Another study by Ernst & Young (2017) using FinTech Adoption Index found that nearly one-third of consumers in the 20 surveyed clients use at least two FinTech services, with 84% of those surveyed being aware of such services. They concluded that the FinTech innovators have

already documented the potential of financial innovation, as evidenced by the rapid increase in FinTech start-ups over the past decades. This study was further supported by Accenture (2016) which reported that the FinTech industry attracted $12.2 billion in investment in 2011. Fastrack to 2018, the top 250 FinTech firms had collectively raised more than $31.85 billion (CBInsights, 2018) supporting the vital place of Fintech services. According to KPMG's (2018) Fintech Pulse report, global FinTech investment rose from $50.8 billion in 2017 to $111.8 billion in 2018, more than doubling, with a record number of deals made through various channels. This suggests an increase in the adoption of FinTech services. Based on the above literature, the study, therefore, hypothesises that:

I. H1: Financial knowledge has a significant influence on the adoption of Fintech services in the Buea Silicon Mountain community of Cameroon,

II. H2: Financial behaviour has a significant effect on the adoption of FinTech services in the Buea Silicon Mountain community of Cameroon,

III. H3: Financial skills have a significant effect on the adoption of FinTech services in the Buea Silicon Mountain community of Cameroon.

2.5 Conceptual Framework

The conceptual framework for this study is based on the literature review on the impact of financial education on Fintech adoption, as well as the Technology Acceptance Model (TAM) and the theory of Reasoned Action (TRA). The framework proposes that financial education influences attitudes towards FinTech adoption, which in turn influences their intentions to adopt FinTech services. It also proposes that perceived benefits and barriers influence attitudes towards FinTech adoption. The proposed conceptual framework is illustrated in the diagram below:

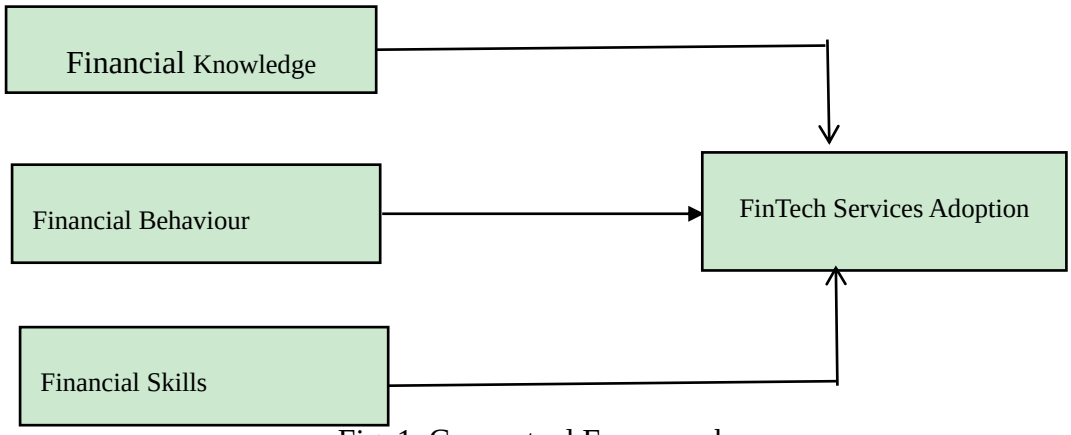

Fig. 1. Conceptual Framework

Sources: Adopted from literature by authors (2023)

The theoretical framework and hypotheses suggest that financial education plays a critical

role in promoting FinTech adoption among households in the Buea Municipality. By understanding the factors that influence individuals' attitudes towards FinTech adoption, financial institutions and policymakers can develop effective strategies to promote financial education and FinTech adoption.

3. Methodology

This study adopted a quantitative approach and data was collected using structured questionnaires and analysed using descriptive and inferential research techniques. The study used a 5- Likert-item structured questionnaire to collect data established from extant literature. The study employed the positivist research philosophy, which assumed that social phenomena can be studied objectively and that empirical methods can be used to generate valid and reliable data (Ryan, 2018). The population for this study was the general population of the Buea Municipality and the study sampled men and women from the age of 20. The sample size for the study was 385 and the final analysed data constituted 300 respondents after through data cleaning. A larger sample size generally leads to more precise estimates and narrower confidence intervals and given that exact population was unknown, a minimum acceptable sample size of 385 was deemed sufficient for the desired level of precision in in this study. This was done in cognisant that it may limit generalisation to population that may be slightly different from the current. The sample technique employed was principally convenience and to an extent purpose as only those above 20 years were, selected. The study participants were recruited from universities, workplaces, and public places.. The used of convenient sampling was motivated by time and cost efficiency as well the most feasible method for quick data collection.

The instrument for data collection was a structured Likert scale questionnaire. The questionnaire consisted of three sections: participants' consent, demographics, and core variable sections. Data was collected using a self-administered questionnaire. The questionnaires were distributed to participants using trained data collectors who took 2 weeks to collect the data.

The data analysis for this study was conducted using Covariance-based Structural Equation Modeling (CB-SEM), a multivariate statistical technique that allows for the examination of relationships among multiple variables simultaneously. The model assessed the model Fit Indices. Model fit indices are used to assess how well the proposed model fits the observed data. The fit indices included were the Chi-square statistic, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). The Chi-square statistic tests the null hypothesis that the model fits the data perfectly.

3.1 Model Specification

This study adopts three endogenous variables namely: financial knowledge, financial behaviour and financial skills. K is Financial knowledge, P is Financial behaviour or attitude, FK is Financial Skills and AD is Fintech Adoption.

AD = f (K, P, FK)

AD = α + β_1K + β_2P + β_3FK + e……...1

PATH 1 → AD = α + β_1K + e1 …… 1.1

PATH 2 → AD = P + β_2P + e2……1.2

PATH 3 → AD = FK + β_3FK + e3…… 1.3

Where: { AD → FINTECH ADOPTION } { K →FINANCIAL KNOWLEDGE } { P →FINANCIAL BEHAVIOUR } { FK →FINANCIAL SKILLS } , e1, e2, and e3 →error terms for paths (1), (2), and (3) while (β_1, β_2 and β_3 → path coefficients). the apriori expectation → $\beta_1 > 0$; $\beta_2 > 0$; $\beta_3 > 0$ as shown below:

Table 1. Measurement of Variables and expected relationships

N	Variables	Measurement	Expected impact	A priori
	Dependent Variable Fintech Adoption (AD)	Five Likert Scale points with coding grading from strongly agree to strongly disagree		
	Independent Variables			
1	Financial knowledge (K)	Five Likert Scale points with coding grading from strongly agree to strongly disagree	+	β>0
2	Financial behaviour (P)	Five Likert Scale points with coding grading from strongly agree to strongly disagree	+	β>0
3	Financial Skills (FK)	Five Likert Scale points with coding grading from strongly agree to strongly disagree	+	β>0

4. Results

The sample participants were fairly evenly distributed between males and females, with males making up 51.2% and females making up 48.8%. The age range of participants was: between 21-30 years 50.5%, 0-20 years 24.1%, 31-40 years 20.7%, and above 40 years old 4.7%. In terms of education level, most of the respondents have completed Advanced level

education 30.2% or hold a first degree 31.9%. A significant proportion indicated postgraduate studies, with 13.2% holding a master's degree and 2.7% holding a PhD.

Table 2. Demographic Distribution of Participants

Variable	Category	Frequency	Per cent
Gender	Male	151	51.2
	Female	144	48.8
Age	0-20 years	71	24.1
	21-30 years	149	50.5
	31-40 years	61	20.7
	41-50 years	13	4.4
	Above 50 years	1	0.3
Education Level	FSLC (First School Leaving Certificate)	23	7.8
	Ordinary levels (O-levels)	36	12.2
	Advanced level (A-levels)	89	30.2
	First Degree(B.Sc)	94	31.9
	Master's degree (MSc, MA, MBA, etc.)	39	13.2
	Doctor of Philosophy (PhD)	8	2.7
	Others	6	2.0

Source: Compiled from collected data

Table 2 revealed the participants' level of familiarity with different digital financial platforms. The majority of participants 271 (91.1%) reported being familiar with mobile payment apps such as mobile money and PayPal, indicating a high level of awareness and usage. Apart from this, most of the findings show a low level of awareness and familiarity with other FINTECH services. Online banking platforms showed a moderate level of familiarity, with 82 (27.8%) of participants indicating their familiarity. Peer-to-peer lending platforms and cryptocurrency exchanges were less familiar to the participants, with 23.7% and 28.8% reporting familiarity, respectively. The lowest level of familiarity was observed with crowdfunding platforms, with only 7.8% of participants indicating their familiarity.

Table 3. Familiarity with Digital Financial Platforms among Participants

Digital Financial Platform	Familiarity	Frequency	Per cent
Mobile payment Apps (e.g. mobile money, PayPal)	Familiar	271	91.1
	Not familiar	26	8.8
Online banking platforms	Familiar	82	27.8
	Not familiar	213	72.2
Peer-to-Peer lending platforms	Familiar	70	23.7
	Not familiar	225	76.3
Cryptocurrency exchange (e.g. Bitcoin, Ethereum)	Familiar	85	28.8
	Not familiar	210	71.2
Crowdfunding platforms	Familiar	23	7.8
	Not familiar	272	92.2

Source: Compiled from collected Data

Usage of FinTech services in the Buea Silicon Mountain Community

Mobile payment apps are the most commonly used digital financial platform, with 47.8% of people using them daily and 31.5% using them weekly. On the contrary, online banking had only 4.1% of daily usage. Peer-to-peer lending platforms, cryptocurrency exchanges, and crowdfunding platforms have lower daily usage percentages, ranging from 3.7% to 1.7%. The findings indicated that online banking platforms and peer-to-peer lending platforms are used less frequently, with the majority of users using them rarely or never. Cryptocurrency exchanges and crowdfunding platforms are the least frequently used, with the majority of users never using them.

Table 4. Frequency of Usage of fintech services in Buea

Digital Financial Platform	Usage Frequency	Frequency	Per cent
Mobile Payment Apps	Daily	141	47.8
	Weekly	93	31.5
	Monthly	22	7.5
	Rarely	30	10.2
	Never	9	3.1
Online Banking Platforms	Daily	12	4.1
	Weekly	30	10.2
	Monthly	54	18.3
	Rarely	77	26.1
	Never	122	41.4
Peer-to-Peer Lending Platforms	Daily	11	3.7
	Weekly	18	6.1
	Monthly	40	13.6
	Rarely	103	34.9
	Never	123	41.7
Cryptocurrency Exchange (e.g. Bitcoin, Ethereum)	Daily	8	2.7
	Weekly	13	4.4
	Monthly	34	11.5
	Rarely	79	26.8
	Never	161	54.6
Crowdfunding Platforms	Daily	5	1.7
	Weekly	12	4.1
	Monthly	26	8.8
	Rarely	60	25.4
	Never	177	60.0

Table 5. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.935
Bartlett's Test of Sphericity	Approx. Chi-Square	6453.705
	Df	325
	Sig.	.000

The study adopted the KMO and Bartlett's test results to ascertain the data suitability for factor analysis. Based on the analysis of data, it was observed that the Kaiser-Myer-Olkin Measure (KMO) of Sampling adequacy was 0.935 which is greater than 0.5 (KMO = 0.935>0.5) implying that the study meets the minimum requirement of sampling adequacy for EFA to be conducted. Equally, we observed that Bartlett's Test of Sphericity with Approx,

Chi-Square (X^2) = 6453.705, and degree of freedom [df] = 325 revealed significant evidence that there exists at least 1 correlation in the data set Sig. [P_value = 0.000 < 0.01]. Based on these conditions EFA was conducted.

The Principal Component Analysis (PCA) was employed varimax. Four new components were extracted with 73.782% of the total variance explained as shown in Table 5.

Table 6. Principal Component Analysis (PCA)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.158	39.069	39.069	10.158	39.069	39.069	6.045	23.250	23.250
2	3.501	13.465	52.535	3.501	13.465	52.535	5.186	19.948	43.198
3	2.903	11.166	63.700	2.903	11.166	63.700	4.893	18.818	62.016
4	2.621	10.081	73.782	2.621	10.081	73.782	3.059	11.766	73.782
5	.845	3.250	77.031						
6	.583	2.241	79.273						
7	.476	1.830	81.103						
8	.453	1.742	82.845						
9	.405	1.558	84.403						
10	.362	1.393	85.796						
11	.340	1.309	87.106						
12	.336	1.294	88.400						
13	.296	1.139	89.539						
14	.293	1.126	90.665						
15	.280	1.077	91.742						
16	.267	1.025	92.768						
17	.253	.972	93.739						
18	.239	.918	94.658						
19	.226	.869	95.527						
20	.208	.798	96.325						
21	.178	.686	97.011						
22	.171	.658	97.668						
23	.164	.633	98.301						
24	.161	.618	98.919						
25	.141	.542	99.461						
26	.140	.539	100.000						

Extraction Method: Principal Component Analysis.

The PCA extracted four components, which together explained approximately 73.782% % of the total variance and the variation was distributed across the different four dimensions. The highest variation was from component 1which accounted for 39.069% of the variance, the second for 13.465%, the third for 11.166%, and the fourth for 10.081%. The structure matrix revealed high loadings of the financial education variables on the first component of financial literacy (knowledge), followed by financial attitude/behaviour and skills in using financial technology tools. Thus, the framework suggests that each component represents a distinct construct within the data (see Table 6).

Table 7. Rotated Component Matrix

Rotated Component Matrix				
	Component			
	1	2	3	4
K4: My knowledge of Financial services is that they are fast	.851			
K5: I know financial services foster Innovation	.851			
K6: Financial knowledge Increase user experience	.846			
K3: I know Financial services are accessible	.845			
K7: Financial services are secured	.835			
K1: Financial services are convenient	.815			
K2: Financial services are cost-effective	.808			
K8: Financial services are reliable	.807			
AD6: The importance of fintech overwhelms the challenges for me		.877		
AD5: I am aware of fintech and its challenges		.860		
AD4: My knowledge of Fintech has helped me to avoid financial pitfalls		.859		
AD7: I can minimize the insecurity in fintech		.858		
AD2: I still prefer holding physical cash than momo		.855		
AD3: I am knowledgeable about fintech but I feel reluctant due risks		.843		
AD1: My fintech knowledge has encouraged me to use Momo		.545		
P4: Financial education made me feel positive about Fintech services			.855	
P2: I prefer to send money into my account through MoMo			.830	
P3: I detest fintech because of the potential			.802	
P7: Financial education positively influenced the way I considerations			.799	
P6: My behaviour towards financial technology has greatly improved			.772	
P1: I prefer holding money in my mobile telephone account than cash			.751	
P5: I prefer making payments through my MoMo account than cash			.707	
FK3: I own an account that keeps track of my finances				.886
FK2: Since I know how to do mobile banking, I sit at home for all the deals				.871
FK1: I desire to engage in fintech but I am limited by financial literacy				.856
FK4: I have subscribed to financial services that yield some income				.854
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

From the findings, AD1 gave a low loading of .545 which is below the threshold (Radloff, 1977) but was maintained given that the entire factor had a high reliability and removing it did not significantly improve the model.

Table 8. Reliability and validity

	Cronbach's alpha	Average variance extracted (AVE)
Financial Adoption	0.923	0.735
Financial Behaviour	0.925	0.689
Financial Knowledge	0.954	0.755
Financial Skills	0.893	0.751

Source: SPSS generated

The study examined the reliability using Cronbach's alpha and all of the Cronbach's alpha values were above 0.90, which shows the results are reliable. To assess convergent validity, Average variance extracted (AVE) was used. Each construct in this study measured a high AVE (AVE > 0.50) which indicates that the constructs are reliable.

To assess the discriminant validity, the study employed the criteria given by Fornell and Larcker (Farrell & Rudd, 2009). Table 8 below shows that the model in this study yielded reliability given that the square roots of AVE were all greater than the values of their corresponding correlation (Latif et al., 2023).

Table 9. The discriminant validity using Fornell and Larcker

	Financial Adoption	Financial Behaviour	Financial Knowledge	Financial Skills
Financial Adoption	0.857			
Financial Behaviour/attitude	0.46	0.83		
Financial Knowledge	0.423	0.455	0.869	
Financial Skills	-0.047	-0.014	-0.14	0.866

Table 1. Confirmatory Factor Analysis (CFA)

Fit Indices	Standard for Good Fit	Calculated Value	Interpretation
CMIN/DF	< 3	1.618	Good fit
SRMR	Close to 0	0.037	Good fit
GFI	> 0.90	0.890	Acceptable fit
NFI	> 0.90	0.929	Good fit
IFI	> 0.90	0.972	Good fit
TLI	> 0.90	0.968	Good fit
CFI	> 0.90	0.971	Good fit
RMSEA	< 0.06 for a good fit	0.046	Good fit

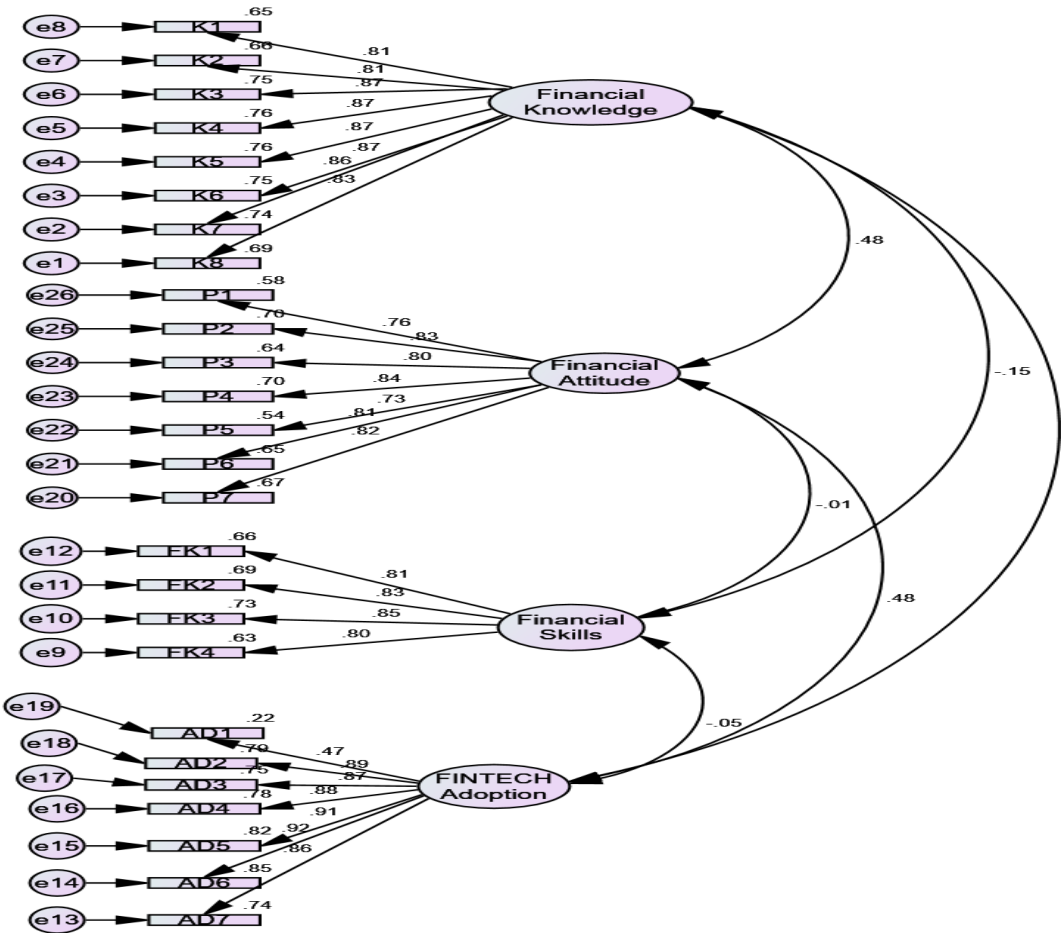

Figure 2. The Measurement Model

The Structural model

The structural equation model was assessed to assess the relationships in the model and to verify the study hypotheses. First, the model was assessed for fitness using the different modification indices before hypotheses verifications. The chi-square statistic was significant, $\chi^2(114) = 454.737$, $p<0.0001$, but the relative chi-square (CMIN/DF) was 1.690, revealing a good model. A good-fitting model is accepted if the value of the CMIN/df is <5, the goodness-of-fit (GFI) indices (Hair et al., 2010); the Tucker and Lewis (1973) index (TLI); the Confirmatory fit index (CFT) (Bentler, 1990) is > 0.90 (Hair et al., 2010). For this study, the study found that an adequate-fitting model and all the indices recommended good results. For instance, the standardized root means square residual (SRMR) was 0.038 which is less than 0.05, and the root mean square error approximation (RMSEA) was 0.046 which is less than 0.08 (Hair et al., 2010). Also, the goodness-of-fit (GFI)= .900, TLI = 0.965, GFI =.9000.890, CFI = 0.969, See table

Table 2. Assessment of Structural Model

Fit Indices	Standard for Good Fit	Calculated Value	Interpretation
CMIN/DF	< 3	1.690	Good fit
RMR	Close to 0	0.038	Good fit
GFI	> 0.90	0.890	Acceptable fit
NFI	> 0.90	0.929	Good fit
IFI	> 0.90	0.969	Good fit
TLI	> 0.90	0.965	Good fit
CFI	> 0.90	0.969	Good fit
RMSEA	< 0.06 for a good fit	0.046	Good fit

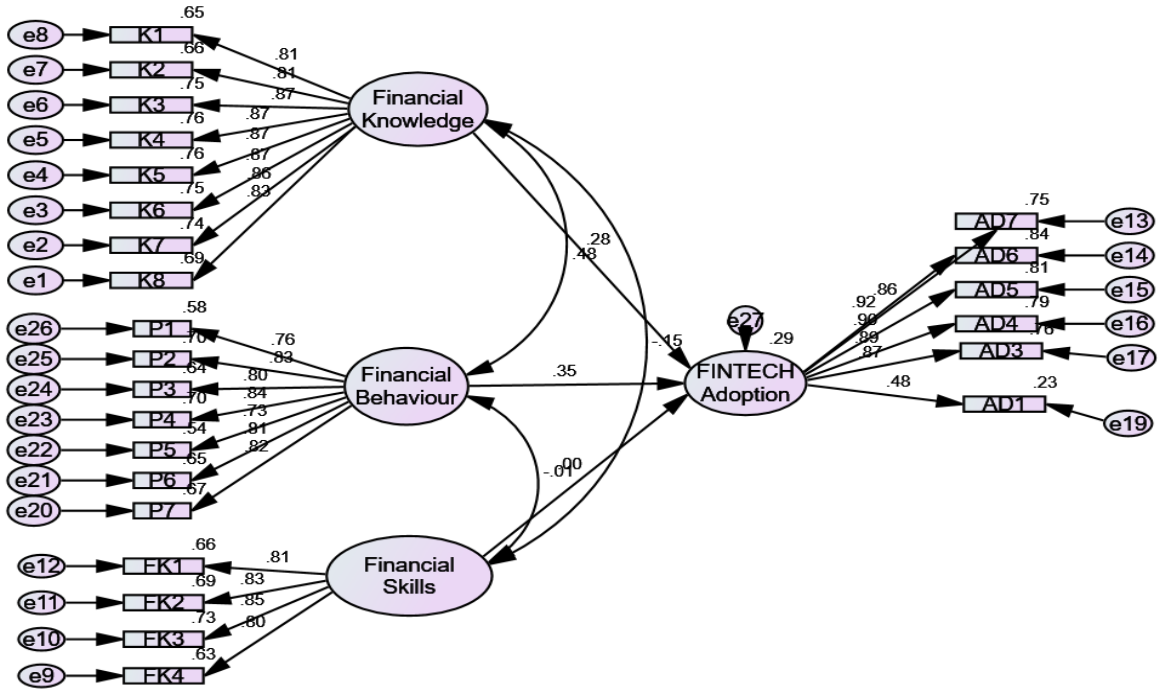

Figure 4. Confirmatory Factor Analysis

The combined effect was assessed for the variables using the squared multiple correlation. The study found a combined effect of .294, which implies that 29.4% variation in Fintech service adoption in Buea is accounted for by the level of financial education measured using Financial Knowledge, Attitude and Financial skills.

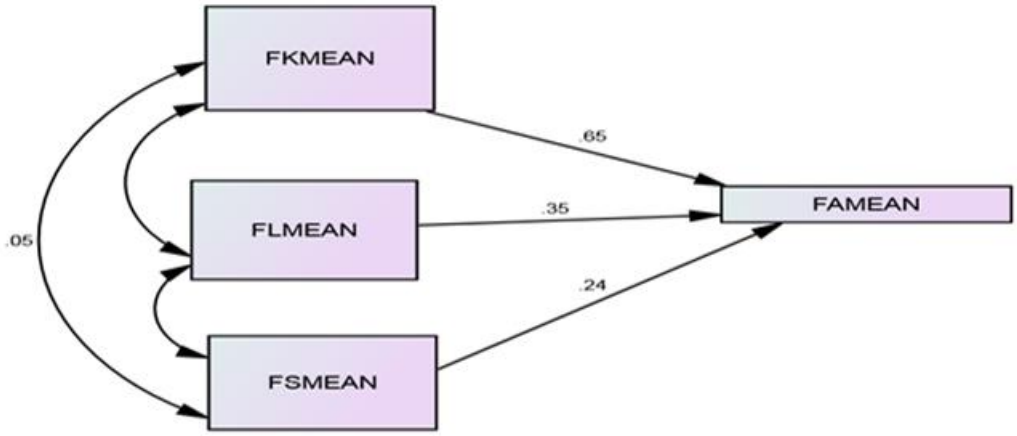

Figure 5. Structural Equation Model

CMIN/DF = 1.690; GFI = 0.890; IFI = 0.969;

CFI = 0.969;RMSEA = 0.046; RMR = 0.038

Table 3. Relationships between independent and FinTech service adoption

	Unstandardized estimates	Standardized estimates	T	P-Value	Decision
Financial knowledge has a significant influence on Fintech services adoption	.330	.283	4.487	***	Reject the null hypothesis
Financial behaviour has a significant effect on Fintech services adoption and usage in Buea	.378	.346	5.391	***	Reject the null hypothesis
Financial skills have a significant effect on Fintech services adoption and usage in Buea	-.004	-.003	-.056	.955	Refuse to reject the null hypothesis

In this study, the effect of financial education (Financial Knowledge, Financial Behaviour, Financial skills) on the fintech service adoption was assessed among inhabitants of Buea. The results in Table 11 revealed that financial knowledge has a positive and significant effect on the level of adoption of fintech services in Buea Municipality (β =.330, t = 4.487, p <0.001). The findings suggested that convenience, cost-effectiveness, easy accessibility, and security among others significantly impact the level of adoption of fintech services.

Also, the study assessed the influence of financial perceived attitudes towards fintech services and the study uncovered that there is a positive and significant influence (b =.378, t

= 5.391, p < 0.001). The findings showed that a more positive attitude towards fintech services, that is the perceived belief that fintech offers innovation solutions, better to send more to the bank via fintech solutions like the use of Mobile Money, ease of tracking tractions and desire to yield income was positively related with adoption of services. The last dimension was the effect of fintech skills (usage) on adoption. The findings did not find enough evidence that financial skills significantly impact the fintech service adoption rate (b =-.004, t = -.045, p =.955).

5. Conclusion

This study aimed to investigate the impact of financial education on the adoption of Fintech services among residents of Buea Municipality. Surveys were distributed to 300 participants, revealing a notably low level of fintech services adoption, with a predominant reliance on mobile money payments and transfers. Online banking platforms and peer-to-peer lending platforms were found to be less frequently utilized, while cryptocurrency exchanges and crowdfunding platforms were the least commonly used, with a majority of users reporting non-usage.

The study concluded that financial education, particularly financial knowledge and financial behaviour, significantly influences Fintech services adoption in Buea Municipality. Notably, financial behaviour emerged as the most impactful factor. The results suggest that individuals with elevated levels of financial knowledge are more inclined to adopt Fintech services. Moreover, a sound understanding of the financial benefits of Fintech, including convenience, secure transactions, cost-effectiveness, and easy accessibility, positively impacts adoption.

Furthermore, the research revealed that individuals with a positive attitude towards Fintech services, perceiving them as innovative solutions, are more likely to adopt them. This favourable attitude may stem from the ease of sending and tracking transactions, as well as the aspiration to generate income through Fintech solutions such as mobile money.

However, the study did not uncover sufficient evidence to support the hypothesis that financial skills significantly impact the adoption of Fintech services. This suggests that individuals' proficiency in using Fintech services, or their level of financial skills, does not exert a significant influence on their adoption rate.

This study recommends that financial education policy should be instituted and encouraged by the government of Cameroon to help improve and consolidate Fintech adoption not only in Buea Municipality but in the whole country. We also recommend the promotion of positive perceptions and beliefs about Fintech, as well as highlighting its benefits.

This study has implications on financial industry and the consumers in that it has revealed the need for increased financial literacy to help improve competition, financial inclusion, and the provision of a wider range of products and services to the consumers. However the study was limited to the Buea Silicon Mountain Community of Cameroon. A more extensive study of

the effects of financial education on the adoption of financial technology services in Cameroon is necessary.

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Authors contributions

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Competing interests

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

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Obtained.

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The Publication Ethics Committee of the Macrothink Institute.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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