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## **Empirical investigation of the Fintech and financial literacy nexus: small business managers' insights in Cameroon**

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**Abstract**

Recent and ongoing advancements in the field of ICT have led to the introduction of increasingly diversified financial products, and their use is improving people's level of financial knowledge and skills. This article aims at assessing the effect of Fintech on the level of financial literacy of small business' managers in Cameroon. To this end, information was gathered using a questionnaire from 209 small business managers in Cameroon. Descriptive statistics, Principal Component Analysis (PCA), and multiple linear regression are used. Results lead to two main conclusions. On the one hand, unlike knowledge of their existence, the frequency of use of Fintech tools is better able to contribute to improving financial literacy levels overall. On the other hand, specifically, this result is more important when it comes to competence and self-confidence in managing financial affairs. As a result, increasing the utilization of financial technology instruments in companies is imperative for efficiency.

**Keys words:** Financial Skill; Financial Knowledge; Financial literacy; Fintech; Small business

**JEL code:** G53, M2, O33

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## 1- Introduction

Social exclusion and lockdown constraints, imposed by COVID-19 health pandemic highlighted the opportunity to speed up access to digital financial services (Sahay et al., 2020). Thus, a population control approach strengthened internet purchases, mobile payments, and remote services. The COVID-19 pandemic increased the usage of digital benefits, notably during general containment. According to Fru and Mishra (2020), a 24% to 32% increase in downloads of mobile banking applications occurred between 2019 and 2020 due to the spread of COVID-19 and its restrictions. Thus, this global health epidemic highlighted the significance of digitalization advances, notably in the field of finance. The great development of the world's financial landscape paints technological advancement as no longer a surprise because Fintech (Technological Finance) stands out as the driving force behind a significant improvement in the financial industry. The term Fintech denotes the use of technology (or ICT as a whole) to increase access to banking and financial services (Wika et al., 2019). It promotes low-income households' access to financial services, and enhances financial inclusion generally. This study investigates the impact of Fintech on financial literacy.

Fintech is important since it modernizes financial services at a fairly rapid pace (Frost et al. 2019). According to Forbes (2019)<sup>1</sup>, \$320 million has been raised by financial technology companies in Africa since January 2015. Furthermore, the Fintech ecosystem recently experienced significant growth. Contrarily, according to the World Bank (2019), only 40% of the world's population has access to the Internet, and 20% of the poorest families are less likely to have a mobile phone, one of the instruments that facilitate the use of Fintech. Accordingly, the development of Fintech significantly impacts financial planning, financial well-being, and economic inequality, through ground-breaking tools like mobile payments, robotics consulting, application-based investment platforms, online banking solutions, online funding techniques (crowdfunding), and virtual currency (cryptocurrency) (Frame et al., 2019). It enables one to obtain low-cost access to formerly opaque financial services which were provided by traditional banks only and to their most wealthy clients (Gabor and Brooks, 2017). Incorporating and utilizing technological opportunities to streamline financial transactions has been made possible by financial technology. In this context, people in both urban and rural regions perform (more simply, more swiftly, and cheaply) complex operations better like paying bills, buying financial assets, fund access, transferring money, etc.

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<sup>1</sup><https://www.forbes.fr/business/fintech-en-afrique-une-augmentation-de-60-en-deux-ans/?amp>

Therefore, Fintech has the potential to help individuals and businesses to become more financially proficient. According to Gabor and Brooks (2017), the level of financial inclusion in low-income countries is increasing at the same rate as these swift developments of innovative financial products and services. For instance, the expansion of mobile payments has significantly improved financial inclusion in developing countries where the traditional bank finance system is underdeveloped and particularly unattractive for small businesses (Morgan and Trinh, 2019). The degree of financial integration, inclusion, and financial literacy are all changing at the same time due to the quick growth of these innovative financial goods and services (Gabor and Brooks, 2017).

The ability to make wise, informed and optimal financial decisions is referred to as financial literacy. According to Hastings and Mitchell (2018), it is the capacity of an individual to understand the nature of financial services, examine financial service options, and make a well-informed choice. It is important for enhancing financial well-being (Shaban et al., 2020), as it facilitates stronger Intelligence interaction (Aun, 2017), efficient financial decision-making (Lusardi et al., 2015), and even drives the selection of the format for financial reporting (Hastings and Tejada-Ashton 2008; Hastings and Mitchell 2018). Knowledge, adoption, and use of FinTech innovations help to improve financial literacy, as well as relations with financial institutions and the financial system in general (Didenko et al., 2018; Leonov et al., 2018). The rise of Fintech contributed significantly to recent improvements in awareness and accessibility to financial services (Chen et al., 2019; Nguyen, 2022). Consequently, it becomes imperative to understand how Fintech and financial literacy are related, which is the focus of the present article.

The existing literature linking Fintech and financial literacy is young, growing, and undeveloped, principally when considering the COVID-19 health crisis period. The related findings are, in fact, contradictory. Indeed, opinions differ on the link between Fintech and financial literacy (Panos and Wilson, 2020). Consequently, some authors see Fintech as a lever in the process of financial inclusion and an important tool for financial education (Eniola and Entebang, 2015; Minerva, 2016; Wolbers, 2017; Morgan and Trinh, 2019; McKillop et al., 2020). Others, however, find a relationship that is either insignificant or negative (Panos and Wilson, 2020; Panos and Karkkainen, 2020; Motroni and Posocco, 2017).

Furthermore, the context of Cameroon is special for several reasons. First, there is a very slow bank penetration rate. According to the Bank of Central African States (BCAS) and 2023's Global Threat Report, the bank penetration rate in Cameroon is about 23.50% in 2021. This is low as compared to other similar countries like Gabon, Mali, Ghana, and Namibia, whose rates

are 27.5%, 28.44%, 50.57%, and 65.57%, respectively. These are also less than the rates of some developed countries, like France's (97%) and Denmark's (99.7%). Access to ICTs for all banks is a reality in Cameroon but remains insufficient. However, current activities such as mobile banking and mobile money will help to improve the rate of bank penetration in Cameroon (Koumetio and Djoumessi, 2022).

Second, according to the World Bank's FinScope (2017) report, less than 10% of young entrepreneurs have access to a bank account in Cameroon. Third, Cameroon is one of the French-speaking states in Africa that has been severely impacted by the COVID-19 health crisis (Sahut and Djoutsa Wamba, 2023). This is also supported by a Survey of Cameroon Inter-Patronal Group (CIPG) in 2020 on 250 companies. Among them, 75% estimate that in absolute terms, the annual turnover loss due to the crisis could reach XAF 3,139 billion (around €4.77 billion) compared to 2019 for companies in the modern sector and this will lead to a reduction in their capacity to contribute to State revenue for about XAF 521 billion (around €791 million). The same study reveals that almost 53,346 permanent employees have been laid off, and 13,834 of them as a result of the crisis. This is consistent with Djoumessi's (2022) observations.

Moreover, Cameroon's economy is mainly focused on intermediation, with the banking sector serving as the primary source of economic funding. Indeed, after more than 15 years of existence and operation, the financial market in Cameroon has only five listed companies, even though the INS (2018) counts more than 220,000, of which more than 90% are small businesses. Thus, the issue that will be addressed in this article is stated as follows: What is the impact of Fintech on financial literacy in small enterprises in Cameroon? The objective of the article is thus to appreciate the effect of FinTech on the financial literacy of small business managers in Cameroon. In a Cameroonian context where financial inclusion is struggling to become visible, our aim with this work is to show that Fintech can contribute to improving financial inclusion in small businesses, as financial digitalization is becoming a necessity for companies wishing to withstand competition.

This study differs from previous research in several aspects in addition to its contextual contribution and positioning in light of literature with controversial outcomes. First, this paper establishes an empirical link between Fintech and financial literacy. This contrasts with earlier works, which focused on determinants of both the adoption of new ICT in firms and the degree of financial literacy (Altintas, 2011; Lusardi et al., 2010; Atkinson and Messy, 2012; Morin et al., 2012; Delafrooz and Laily, 2011). Second, impact analyses are needed but haven't been sufficiently mentioned in the literature, which is mostly focused on statistical analysis (Moenjak et al., 2020). Third, in addition to the widely discussed digital payment tools (Jack et al., 2013;

Suri, 2017), this research also includes, as variables, recent innovations of Fintech like cryptocurrency, crowdfunding, and banking applications which are now being taken into account in the financial system. Fourth, previous studies on the link between the two concepts (Nguyen, 2022; Hasan et al., 2022) only use financial knowledge to capture financial literacy, thus neglecting the two other characteristics (competence and self-confidence), which are crucial for an appropriate assessment. Fifth, in contrast to Nguyen's (2022) methodology, this research develops an index for each of the main research variables.

In addition to the above contributions, from a managerial perspective, this study is quite interesting to business managers. It helps them understand the management of the financial resources of their company, as well as its personal finance. It is also a starting point for managers to appreciate how technology advancement tools can boost their financial inclusion, literacy, and well-being. Furthermore, it provides policymakers in Cameroon and other developing countries a fundamental stool on which policies to promote access to financial services can be built.

Subsequent to this introduction (section 1), the remainder of the article is organized around four additional sections. Section 2 presents the literature review. Section 3 highlights the methodology used. Section 4 highpoints and discusses the results obtained. Finally, section 5 concludes the article.

## **2- Literature Review**

### **2.1- Conceptual framework for small business and Fintech in Cameroon**

**Small Businesses are part of Small and Medium Sized Enterprises or Industries (SME/SMI).** The official definition of SME/SMI in Cameroon derives from Law No. 2015/010 of July 16, 2015 amending and supplementing certain provisions of Law No. 2010/001 of April 13, 2010 on the promotion of SMEs. This law defines the criteria for classifying companies into the "Small Enterprise" (SE) and "Medium Enterprise" (ME) categories. According to these criteria, the small companies' category comprises companies employing no more than 100 people, and with annual sales excluding taxes not exceeding three (03) billion CFA francs. According to statistics from the National Institute of Statistics (NIS, 2010), this category of company currently represents over 90% of Cameroon's national economic fabric, and its share of gross domestic product is estimated at 34%.

According to the Global Business Survey of CIPG in 2021, 58% of businesses believe that they are digital. Only 38% of companies have a technology charter and 81% have a website. 85% use social networks to communicate and 67% use mobile applications in their activities. The

technological tools deployed are aligned with the company's strategy. Furthermore, the digitalization particularly concerning financial operations in SMEs, will help to boost the financial education of business owners, especially as the global financial environment is becoming increasingly demanding in this respect (GICAM, 2021). According to the Financial Services Authority (FSA), financial literacy is knowledge, skills, and beliefs that influence attitudes and behaviors to improve the quality of decision-making and financial management to achieve prosperity. The FSA expects financial literacy to bring benefits to the wider community, such as the ability to choose and use financial products and services tailored to their needs, plan their finances better, and avoid investing in unclear financial instruments.

## **2.2- Theoretical justification for the relationship between Fintech and financial literacy.**

We use three main theories in this study to illustrate the relationship between Fintech and financial literacy: The theory of technology acceptance to motivate adoption. Theory of technology diffusion explains the transmission mechanisms toward financial literacy; the theory of trust to emphasize the attitude of individuals toward technological change. Finally, theory of technology transfer justifies the link between technology and small businesses.

### **2.2.1- Unified Theory of Acceptance and Use of Technology or Technology Acceptance Model (TAM)**

The theory of technology adoption is founded on the theory of reasoned action of Fishbein and Ajzen (1975), which states that beliefs influence attitudes, which in turn affect intentions, and develop behavior. The Unified Theory of Acceptance and Use of Technology (UTAUT), created by Davis (1989), argues that two fundamental considerations (ease of use and utility) are sufficient justifications for adopting a new technology. As stated by Bobillier Chaumon et al. (2006), perceived usefulness is the degree to which a person believes that utilizing a particular innovation would enable them to perform better, as opposed to ease of use, which is concerned with the challenges experienced when using this innovation (no special effort is necessary). These authors claim that these two factors determine the intention of use since, if a technology is deemed helpful and simple to use, the user will more fully realize its advantages.

Referring to this research, this theory implies that individuals who are aware of the advantages of Fintech technologies will be able to recognize how they will improve their level of inclusion, education, and financial literacy. According to Venkatesh et al. (2016), COVID-19 has encouraged the development of Fintech and in the process is pushing the financially illiterate to educate themselves in order to adapt, unlike the financially educated. The use of these

financial innovations (Fintech) can be explained by the fact that, on the one hand, consumers and businesses see them as beneficial and simple to use (Dauphin-Pierre, 2011) and, on the other, create a need for financial education for illiterate recipients (Morgan and Trinh, 2019). This idea is therefore used in this study to better understand how potential consumers behave when using Fintechs tools, particularly in association with financial literacy (Venkatesh et al., 2016). The diffusion of innovation theory provides the best justification for how these two ideas are diffused.

### **2.2.2- The diffusion of innovation theory (DIT): adoption aspect**

The diffusion of innovation theory, which draws upon existing theories in the sociology of behavioral change, describes how technologies are adopted at different phases. Innovation, according to Rogers (1995), a founder of this idea, is the process by which an innovation is communicated, through particular channels, over time, among the members of a social system (i.e., it is the dissemination of a process among people in reaction to learning an innovation). The components that influence how speedily an innovation is embraced by a social group and, as a result, outcomes in behavioral change, are defined by the diffusion of innovations model, which is both frequently used and frequently challenged.

To explain how an innovation spreads among users, this theory does not focus on the circumstances or processes involved in its production, but instead considering it to be finished. Diffusion is viewed as a specific type of pandemic that spreads over time and among people. When it comes to knowledge, a person who is exposed to innovation responds by his or her personal characteristics and the social structure in which they are evolving (Corbel, 2014). In other words, it is possible to consider Fintech innovations as vectors for the development of financial inclusion through training, routines and education. Indeed, the adoption and use of a technology is the result of good communication, as innovation is fundamentally a communication problem (Badillo, 2013), the advantage being the consideration of feedback effects in any process (Wiener, 1954).

### **2.2.3- The economic theory of trust**

According to Thuderoz et al. (1999), the consideration of trust is inevitably carried up while examining economic transactions since trust is important as soon as there is uncertainty associated with the transaction. Williamson (1993) examines trust in terms of transaction costs because, according to his economic theory of trust, this lowers the cost of operations in transactions. Thus, the relationships between individuals and the components of their material



and symbolic environment, such as other people, household products, organizations, laws, and technologies, are characterized by varying levels of trust, ranging from suspicion to faith. This theory claims that direct and indirect communication interactions within the social system, which enable each person to know more about his or her surroundings and have a more or less significant impact on them, are the basis of the attitude of trust (Thuderoz et al., 1999).

To make their inventions available, Fintech companies must communicate about them, especially about how to use them. To ensure that the adoption and use of technology proceeds smoothly, it is the responsibility of the final user or consumer to accept ownership of them. Due to this, financial literacy appears to be a vital step in the adoption and usage of financial technologies (Morgan et and Trinh, 2020). To minimize uncertainty and promote more inclusion, education, and financial literacy, it is therefore possible to view the use of various Fintech products as knowledge that has to be acquired or updated. Based on its ability to comfort others by decreasing their perceived uncertainty, this knowledge then structures a level of confidence. To benefit from the improved behaviors that Fintech instruments encourage, adoption requires a certain level of confidence, and this comes from good financial education (Fonseca and Lord, 2019). As a result, confidence is an important factor in achieving financial well-being outcomes, along with financial competence and knowledge (Fonseca and Lord, 2019).

#### **2.2.4- Theory of technology transfer**

Technology transfer (TT) is a process whereby an industrial player or simply a receiver appropriates a technology from a public player or another private company to use it and, more often than not in the case of B-to-B, marketing it. Such a process involves the transfer of tangible or intangible assets from one entity to another.

According to the theory of technology transfer, the challenge of technology transfer is to combine the acquisition of external skills with the development of the country's skills, to give the country a distinctive competitive advantage. Thus, assimilated within the framework of this work, the theory simply explains that for the transfer of technology to be effective, the receivers must have the capacity to understand it in order to accept it (Bennani and Dinar, 2022). In this context, Fintech appears to be an important lever for mass financial education, particularly for young entrepreneurs (Koumetio and Djoumessi, 2022) or young companies like small businesses. This is not surprising, as the international environment is increasingly demanding a level of digitalization of businesses to ensure that technology transfer is effective, particularly in the field of Fintech. To this end, many small businesses are developing in-house capabilities

to respond to this concern, which seems to be an area where competition is becoming increasingly fierce. Consequently, the small businesses that stand to benefit are those that are rapidly catching-up with the phenomenon of financial digitalization.

## **2.2- Summary of empirical literature on the link between Fintech and financial literacy**

According to Lusardi (2019), who proposes a conceptual framework for the link between Fintech and financial literacy, the existing literature linking these two variables is recent and incomplete, and the results are inconsistent. Therefore, we distinguish between studies that demonstrate a positive relationship between Fintech and financial literacy (Jünger and Mietzner, 2020) and those that find no or a negative relationship between the two (Nguyen, 2022).

Jünger and Mietzner (2020) and Morgan and Trinh (2020) explain that the development of Fintech is positively correlated with financial literacy Liu et al. (2021) add that Fintech innovations are proving to be an added value of good financial education for users. Morgan and Trinh (2019) in the same line show that Fintech innovations are positively associated with financial literacy. According to them, the digitalization of financial services creates the need for mass financial education. Therefore, the development of the Fintech sector is an important lever in the development of mass financial education policies. Furthermore, Wolbers (2017) shows that developments observed in the Fintech sector have a positive influence on financial inclusion. Similarly, Sadigov et al. (2020) find a positive relationship between Fintech and financial literacy. In the same perspective as Mulasiwi and Julialevi (2020), Yoshino et al. (2020), investigate the effect of financial literacy on Fintech service adoption in Japan (electronic money, mobile payment applications, and crypto asset holding). Their findings indicate that people with higher literacy levels are more likely to use Fintech services. In this sense, according to Elsinger et al. (2018), changes in the digitization of financial services require new forms of financial education. In addition, Shaban et al. (2020) find that government integrity, Internet use, economic growth, banking system stability, and human development are positively related to the level of financial education. Philippas and Avdoulas (2020) find, in a sample consisting mainly of students, that financial well-being is largely influenced by financial literacy.

Martini et al. (2021) look at the impact of Fintech on financial literacy in Indonesia. From a question administered to a total sample of 401 people, they show that, unlike the level of risk and interest in use, the perceived ease and efficiency of using Fintech have no impact on financial inclusion. The weak role played by financial literacy allows them to conclude that its

effect on Fintech becomes fragile when individuals master its use. Yoshino et al. (2020) also find that there is a negative and significant effect on probability of possessing cryptocurrency and financial literacy. According to Yeo and Fisher (2017) and Philippas and Avdoulas (2020), Fintech does not sufficiently address consumers who do not have good prior financial knowledge. For example, applications used in smartphones can be used to improve financial capability, since it is easier for users, on the one hand, to track their income and expenditure and, on the other, to be more resilient in the face of a financial shock.

Additionally, as far as small business managers are concerned, anyone involved in the financial decision-making process must at least have the knowledge, skills, and confidence to ensure that the decisions they make can be justified (Palameta et al., 2016). The knowledge referred to here is an individual's understanding of themselves and the financial issues they face. Skills refer to an individual's ability to use financial knowledge in financial management. Finally, the term 'self-confidence' here refers to confidence in making financial decisions. Lontchi et al. (2023) investigate the role of financial literacy as a mediator in the relationship between Fintech and SME performance in Cameroon. These authors conclude that there is a significantly positive link between Fintech and financial literacy. They also demonstrate that the latter plays an important positive role in the relationship between Fintech and the performance of these companies. Our analysis differs from that of these authors. First, they are focused on financial services, while we are dealing with FinTech tools. The methodology used is not identical. They use PLS-SEM, but we use PCA and linear regression. More critically, their financial literacy measure is not complete. In our article, we have mobilized the broad dimensions indicated in the literature (financial knowledge, financial skills, and financial self-confidence). The empirical framework of the study is also different. Based on the foregoing, this study hypothesizes is that Fintech tools help small business managers in Cameroon to become more financially literate.

### **3- Methodological approach to the study**

The nature and source of the data, the operationalization of the variables, and the econometric and statistical techniques employed in this article are all discussed in this section.

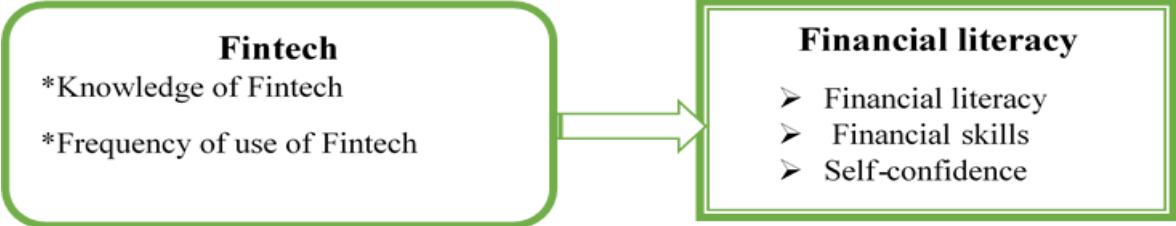
#### **3.1- Nature and source of data**

The paper focuses on Small businesses, which are the most prevalent in Cameroon. Indeed, according to the 2021 SMEESC<sup>2</sup> statistical yearbook published in June 2022, 98.75% of Cameroon's economic potential is dominated by small businesses. According to the National Institute of Statistics (NIS, 2018), about 90% of Cameroon's companies are of small sizes. The sampling technique used is the non-probability method. Specifically, it implements the convenience and reasoned choice strategies. These techniques are frequently employed in developing nations, where the researchers build their samples conditioned on limited resources. The research uses primary data collected using a questionnaire. The survey was carried out in the framework of a study on inclusive business finance in Cameroon, that was undertaken by the Centre for Research and Study in Management and Economics (CRSME). In the cities of Douala, Yaoundé, Dschang, and Bafoussam, the survey was carried out between May and July 2020 amid the COVID-19 health crisis. The NIS (2018) estimates that more than 85% of Cameroon's enterprises are located in these towns. 300 questionnaires were distributed, 225 were completed, and 16 were considered unusable. Thus, 209 businesses constitute the final sample made.

**3.2- Empirical model and operationalization of variables**

The purpose of this research is to investigate if the use of Fintech tools promotes financial literacy among business managers. The method chosen for this research is hypothetico-deductive, with positivism serving as its epistemological pillar, given that we begin with the literature to construct the tested hypotheses. The conceptual model considered as the foundation for the study's hypothesis is represented by figure 1.

**Figure 1:** Conceptual representation the model



The mathematical formulation of this model allows us to highlight the theoretical model of the present study as follows:

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<sup>2</sup> Small and Medium-sized Enterprises Economy and Social Craft.

$$FI\_LIT_i = \beta_0 + \sum_{j=1}^K \beta_j X_{ji} + \varepsilon_i$$

$$j = 1, 2, 3 \dots k (k = 5) \quad i = 1, 2, 3 \dots n (n = 209)$$

With  $X_{ji}$ , the explanatory variable  $j$  associated with firm  $i$ ,  $\beta_0$ , the constant term;  $\beta_j$ , the estimated coefficient;  $n$ , the number of observations or sample size;  $k$ , the number of explanatory variable (main and control variables) and  $\varepsilon_i$ , the error term. The empirical form of the model or the specific model that analyzes the relationship between financial literacy and Fintech is as follows:

$$FI\_LIT_i = \beta_0 + \beta_1 \cdot Know\_Fintech_i + \beta_2 \cdot Freq\_Use_i + \beta_3 \cdot Sec\_Act_i + \beta_4 \cdot TO_i + \beta_5 \cdot Age_i + \varepsilon_i$$

With:  $FI\_LIT$  = financial literacy;  $Know\_Fintech$  = Knowledge of the existence of Fintech tools;  $Freq\_Use$  = frequency of using Fintech instruments;  $TO$  = Turnover and  $Age$  = age of the firm.

The existing literature provided the basis for the operationalization of the study's variables. The explained variable (financial literacy) and the explanatory variables (Fintech and control) are distinguished from one another. The main variables are measured using the 5-point Likert approach.

- **The dependent variable: financial literacy**

This is a multidimensional variable, assessed in the context of this study using three sub-variables: financial knowledge, financial skill and financial self-confidence. The operationalization approach for these variables is displayed in Table 1 in the appendix. It demonstrates that, in line with existing literature, we selected respectively 6, 11, and 8 items to measure each of these sub-variables, (Morin et al., 2012; Lusardi et al., 2010).

The paper built a synthetic index, which is appropriate since these are multidimensional variables. To do this, Principal Component Analysis (PCA) is initially carried out, and Cronbach's Alpha reliability test is applied to guarantee internal consistency between items. The findings for each of the indices constructed in this study are in Table 3.

Table 3: Results of exploratory analyses: Principal Component Analysis of the variables

Variables	KMO	Bartlett's test	Initial Items	Selected Items	Total factors	Selected factors	Total variance	Cronbach's Alpha
<b>Financial literacy</b>	0.811	0.000	25	20	20	6	69.354	0.845
<b>Financial knowledge</b>	0.570	0.000	6	4	4	2	72.435	0.546
<b>Financial competencies</b>	0.792	0.000	11	11	11	3	72.797	0.848
<b>Self-confidence</b>	0.563	0.000	8	5	5	3	74.794	0.581
<b>Fintech knowledge</b>	0.797	0.000	8	5	5	2	81.382	0.838
<b>Frequency of use</b>	0.596	0.000	8	8	8	3	65.566	0.506

In addition to the three indices that represent each of the three components of the financial literacy factor, an overall index is calculated. To ensure internal consistency between the items, a Cronbach's alpha reliability test is applied. According to this reliability test, the values for financial literacy, financial knowledge, financial competence, and self-confidence are 0.845, 0.546, 0.848, and 0.581, respectively. Table 2 also indicates that each of these variables initially has 20, 4, 11, and 5 items respectively. After item extraction, 6 factors, 2 factors, and 3 factors are used for the building of the index, with a total explained variance of 69.35%, 72.43%, 72.79%, and 74.79%, respectively. Tables 4, Table 5, Table 6, and Table 7 in the appendix, respectively, for financial literacy, financial knowledge, financial competence, and self-confidence, provide details of the contributions of each item in the development of the various factors. The Bartlett statistic associated with these variables is significant at the 1% threshold with a KMO value greater than 0.5, which is satisfactory and it can be concluded that the correlation matrix is an identity one.

Authors like Correia et al. (2009), Krishnakumar and Nagar (2008), Nagar and Basu (2002), and Djoutsa et al. (2018) point out that the most frequently used PCA-derived indices are produced either from the first component or from the proportional average of all the factors computed with the weights specified by the proportional variances of each eigenvalue. The second approach is preferred in this study. As a result, each variable's index is calculated and standardized on a scale of 0 to 1, with 0 denoting the constructed index's lowest level and 1 indicating its greatest level. For the study's main explanatory variables, the same analysis is performed.

**- Main explanatory variables**

The main explanatory variables of the study are those related to Fintech, specifically, knowledge of their existence and frequency of use. Eight indicators are used to assess the Fintech variables, as presented in Table 2 in the Appendix, which is based on the literature (Morgan, 2021; Nguyen, 2022). For each of the two Fintech variables, an index is created using

the same logic and technique similar to that of the financial literacy variable. Referring to the variables knowledge of the existence and frequency of use of Fintech tools, the last two rows of Table 3 display a Cronbach's Alpha value of 0.838 and 0.506, respectively. Table 3 displays the five-point Likert scale that was used to record these various items. Details concerning PCA analysis are in Table 8.

The eight usable items were submitted to a Principal Component Analysis (PCA), but after reduction, only five and eight of them remained. The findings make it possible to isolate three components (two components) with eigenvalues greater than one that account for the use of Fintech (knowledge of the existence) tools. The KMO index for these three (two) components is 0.596 (0.797), which is generally outstanding since it is higher than 0.5 and explains 65.566% (81.382) of the entire volume of information. The Barlett's test has a high value with zero probability. More information concerning the results of PCA analysis concerning this variable is provided in Table 9. These elements are utilized to create an index for each of these two Fintech variables, similar to how the financial literacy variable was calculated.

**The control variables include:** the sector of activity (Sec\_Act), the turnover (TO), and the age of the company (Age). The details concerning their items are in Table 11.

Concerning the statistical and econometric materials, flat sorting is mainly employed in this work to describe the qualitative factors, central tendency, and dispersion characteristics are used to describe the quantitative variables, and principal component analysis is used to generate synthetic indices for all the major variables. After the various indices have been built, the previous empirical model is estimated using the Ordinary Least Squares (OLS) technique. In the section that follows, the findings are emphasized.

## **4- Results and discussion**

### **4.1- Descriptive statistics**

Some statistics of respondents' characteristics are shown in Table 10. From there it appears that men constitute 71.8% of the studied population. In addition, the majority of respondents (73.2%) are below 40. In terms of degree of education, the sample is composed of individuals with a first-cycle university diploma (41.8%), a high school diploma (35.1%), and a second-cycle university diploma (17.3%), respectively. Given that the statistical unit of the study is small businesses, it makes sense that the majority of respondents (49.8%), as shown in Table 10, are owner-managers. Thus, in Cameroon, the vast majority of small-scale business owners also serve as their structures' managers.

**Table 10: Respondents' Characteristics**

<b>Variable</b>	<b>Modality</b>	<b>Number</b>	<b>Percentage</b>
<b>Gender</b>	Male	144	71.8
	Female	59	28.2
<b>Age</b>	20-30 years old	65	31.1
	30-40 years old	89	42.1
	40 to 50 years old	42	20.1
	50 to 60 years old	13	6.2
	Over 60 years old	1	0.5
<b>Level of study</b>	Primary	9	4.3
	Secondary	73	35.1
	University 1	87	41.8
	University 2	36	17.3
	University 3	4	1.9
<b>Position in the company</b>	Owner-manager	103	49.8
	Director	24	11.4
	Financial Director	4	1.5
	Chief Accountant	6	2.5
	Other (Accounting Assistant, Internal Controller and Executive Assistant)	72	34.8
		Total	209

### **Characteristics of the companies in the sample**

Characteristics of the enterprises used in this study are presented in Table 11. From there it appears that 157 of the 209 companies considered in the study are sole proprietorships, followed by Limited Liability Companies (LLCs), which constitute 20.4% of the sample. They are essentially less than 15 years old, with most of their staff being 10 or less. Indeed, 73.9% of our small businesses have less than 5 employees, while only 3.9% of them have more than 20 employees. Additionally, the commerce (66%) and services (30.1%) sectors represent the majority of these companies. There are just 2 industrial enterprises out of the 209 in the sample. These statistics make sense insofar as the Statistical Yearbook of SMEESC 2021 published in June 2022 shows that 84.2% of the actors are in the tertiary sector, 15.63% in the secondary sector, and only 0.17% in the primary sector. Their effectiveness depends not only on their financial capacity, the skills of their promoters, and market opportunities, but also on the quality of the public policies. 81.4% of the managers of these companies report that their annual turnover is less than XAF 6 million and 14.2% indicate having a global annual sale of more than XAF 8 million. Furthermore, 25.6% of them report a decrease in their turnover, and 57.1% of them indicate a rise in turnover when compared with previous years. This means that for most of the companies in our study, sales volume and value have increased considerably. This can be justified by the fact that most of them are also in the commercial sector. In a similar



vein, 55.2% of these managers claim that their company's results stayed stable, as opposed to a growth for 19.2% of them.

**Table 11: Characteristics of the companies in the sample**

<b>Variable</b>	<b>Modality</b>	<b>Number</b>	<b>Percentage</b>
<b>Legal status</b>	Limited Companies	3	1.4
	Limited Liability Companies	43	20.4
	General partnership companies	1	0.5
	Sole proprietorship companies	157	75.2
	Other	5	2.4
<b>Activity sector</b>	Industry	2	1.0
	Trade	140	66.0
	Service	63	30.1
	Other	6	2.9
<b>Sales figures</b>	0-2 000 000	97	4.4
	2 000 000 - 4000 000	48	23.0
	4 000 000 - 6000 000	25	12.0
	6 000 000 - 8 000 000	9	4.4
	8 000 000 - 10 000 000	30	14.2
<b>Company age</b>	Less than 4 years old	71	34.3
	Between 4 and 8 years old	60	28.5
	between 8 and 12 years old	45	21.3
	between 12 and 16 years old	17	8.2
	Over 16 years old	16	7.7
<b>Personnel</b>	Between 1 and 5	154	73.9
	Between 5 and 10	42	19.8
	Between 10 and 15	8	3.9
	More than 20	5	2.4
<b>Change in sales</b>	Downward	54	25.6
	Stable	119	57.1
<b>Evolution of results</b>	On the rise	36	17.2
	Downward	54	25.6
	Stable	115	55.2
	On the rise	40	19.2
	Total	209	100.0

As stated in the methodology, the variables in this study are derived using an index from the set of components acquired following PCA. Given the quantitative nature of these variables, a description is required. To illustrate this, the average, standard deviation, maximum, and minimum values for each variable index are displayed in Table 12.

**Table 12: Descriptive statistics for the study's quantitative variables**

	N	Min	Max	Average	Standard deviation
Fintech knowledge	209	0.00	1.00	0.1807	0.15248
Frequency of use	209	0.00	1.00	0.0645	0.12707
Financial Knowledge	209	0.00	1.00	0.5018	0.18251
Financial Competence	209	0.00	1.00	0.4697	0.20936
Self-Confidence	209	0.00	1.00	0.5702	0.17073
Financial Literacy	209	0.00	1.00	0.5953	0.13244

Given that, on average, 59.53% of these companies seem to have a good overall level of financial literacy, Table 12 demonstrates that managers have a suitable degree of financial literacy. More than half of all company managers have an above-average level of global financial literacy, as measured by the overall index (59.33%). The related variability is about 13.24%. One of the reasons for this statistic is the profile of managers. Most of the respondents occupy positions related to the company's financial or accounting affairs, and have had an advanced education, since most have a university degree. Finke and Huston (2014) show that education significantly affects financial literacy.

The sub-component variables, which drive this overall financial literacy, seem to be financial knowledge and financial confidence. Indeed, 50.18% and 57.02% of the study's company leaders performed well on these two measures respectively. However, only 46.97% of them have strong financial capability, with the highest variability (0.209), as reflected by its standard deviation. In a similar vein, just 18.07% of the sampled companies' managers are strong regarding the knowledge of the existence of technological finance tools, and only 6.45% of them use these tools frequently. Despite having a respectable level of financial literacy, this finding shows that these companies have not completely embraced the financial technology. Estimates will be carried out to confirm this supposition.

## **4.2- Results of explanatory analyses**

### **4.2.1. Main results**

For the empirical association between knowledge of the existence and the use of Fintech tools and financial literacy, results are provided in accordance with the considered dimension of financial literacy. Therefore, the results of the overall financial literacy index, as well as the outcomes of each of its three components will be presented. Table 13 illustrates the effect of Fintech on the global index of financial literacy.

**Table 13: Fintech and Financial Literacy (Overall Index)**

variable	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)
Panel A: With control variables					Panel B: Without control variables			
Constant	0.454*** (0.000)	0.053	8.522		0.609*** (0.000)	0.015	40.128	
Fintech knowledge	-0.091 (0.154)	0.063	-1.431	0.950 (1.053)	-0.111* (0.066)	0.060	-1.851	0.992 (1.008)
Frequency of use	0.136* (0.097)	0.082	1.667	0.970 (1.031)	0.097 (0.178)	0.072	1.352	0.992 (1.008)
Activity sector	0.049*** (0.008)	0.018	2.689	0.959 (1.042)	/	/	/	/
TO	0.019** (0.015)	0.008	2.457	0.790 (1.266)	/	/	/	/
Company age	0.001 (0.959)	0.009	-0.052	0.805 (1.242)	/	/	/	/
Model Adjustment	R <sup>2</sup> = 0.108; Adjusted R <sup>2</sup> = 0.083; Standard error = 0.12954; DW = 1.868; F = 4.284***, Pval = 0.001				R <sup>2</sup> = 0.098; Adjusted R <sup>2</sup> = 0.079; Standard error = 0.1835; DW = 1.314; F = 3.842***, Pval = 0.009			

*Note: The dependent variable is financial literacy. \*, \*\*, \*\*\*, indicate significance at the 10%, 5% and 1% levels respectively.*

Findings when the control variables are included in the regression analysis are highlighted in Panel A of Table 13. The "Variance Inflation Factor" (VIF)<sup>3</sup> statistic, tolerance, and Durbin-Watson (DW) are provided and show that there are no autocorrelation and/or multicollinearity problems. According to the criteria, this statistic must show a value of less than 10 to rule out collinearity, and the tolerance value must be very close to 1. (Chatterjee et al., 2000). A DW statistic with a value higher than 1.65 also suggests the absence of autocorrelation. The findings in column 5 of Table 13 demonstrate that the model does not have an autocorrelation issue. A large autocorrelation issue in the calculated model is likewise extremely unlikely, according to the Durbin-Whatson value of  $1.868 > 1.65$ . As a result, the estimation's findings can be used. In light of this, we point out that the Fischer statistic, with an adjusted R<sup>2</sup> of 8.3%, is significant at the 1% level. In other words, only 8.3% of the variation in the overall financial literacy score of small firms in Cameroon can be attributed to the factors used, which are exclusively knowledge and use of Fintech technologies. In fact, this low explanatory power is likely because, as demonstrated in the literature, the determinants of ICT adoption (including finance-oriented ICT) are innumerable. This is also justified by the fact that the constant is significant at the 1% level.

From Table 13, it is observed that managers' financial literacy is significantly influenced by the sector of activity and the turnover of their company. In reality, it is logical that as a firm grows in size and complexity, the need for using current financial tools increases, leading to an

<sup>3</sup>In the context of a multiple regression, the VIF statistic is used to gauge the extent of multicollinearity in the variables used.

increase in stakeholders' financial literacy. This is in line with the conclusions of Hussain et al. (2018) and Abor and Quartey (2010).

Table 13 likewise indicates that, in contrast to knowledge, the coefficient of frequency Fintech tools usage is positive and significant at the conventional threshold. The level of financial literacy of small business managers in Cameroon is therefore raised as a result of the increased use of Fintech products. In other words, one is better prepared in terms of financial knowledge, skill, and risk-taking the more financial technology they use. However, Panel B of Table 13 also shows that this link is very dependent on the existence of control variables. Although the relationship is usually favorable, it is insignificant. Financial literacy is negatively impacted by knowledge of Fintech instruments, but the effect is insignificant. The limited sample size and poor knowledge of technology advancements among the population in developing countries like Cameroon, can explain this unexpected outcome. In Panel B of Table 13 at the 10% level, the relationship's negative is confirmed. According to Morgan and Trinh (2020), the lack of high-quality infrastructure that can support these innovations can be the cause of the absence of Fintech or the negative relationship between Fintech and financial literacy.

Globally, frequent use of these technologies is more likely to increase the financial literacy of small business managers in Cameroon, than knowledge of the existence of these Fintech instruments. This result supports the conclusions of Morgan and Trinh (2019) and McKillop et al. (2019). The outcomes of this study, nevertheless, differ from those of Ryu (2018) and Dermody et al. (2019). To better understand these results, the financial literacy variable is decomposed into its three major components (financial knowledge, financial skill, and confidence).

**Table 14: Fintech and Financial Knowledge**

variable	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)
Panel A: With control variables					Panel B: Without control variables			
Constant	0.512*** (0.000)	0.077	6.633		0.521*** (0.000)	0.021	24.714	
Fintech knowledge	-0.081 (0.382)	0.092	-0.876	0.950 (1.053)	-0.058 (0.488)	0.083	-0.695	0.992 (1.008)
Frequency of use	-0.154 (0.196)	0.118	-1.298	0.970 (1.031)	-0.140 (0.163)	0.100	-1.399	0.992 (1.008)
Activity sector	-0.003 (0.910)	0.026	-0.114	0.959 (1.042)	/	/	/	/
TO	0.004 (0.726)	0.011	0.351	0.790 (1.266)	/	/	/	/
Company age	0.008 (0.525)	0.013	0.638	0.805 (1.242)	/	/	/	/
Model Adjustment	R <sup>2</sup> = 0.019; Adjusted R <sup>2</sup> = 0.009; Standard error = 0.187; DW = 1.688; F = 0.691; Pval = 0.631				R <sup>2</sup> = 0.011; Adjusted R <sup>2</sup> = 0.001; Standard error = 0.182; DW = 2.147; F = 1.141; Pval = 0.322			

*Note: The dependent variable is financial knowledge. \*, \*\*, \*\*\*, indicate significance at 10%, 5% and 1% respectively.*

Because the p-value for the Fisher statistic is not significant at the accepted level, the findings in Table 14 demonstrate the model's lack of relevance. Surprisingly, the findings show that none of the study's variables have a significant coefficient. In fact, except for the constant, all other variables exhibit non-significant coefficients regardless of the model taken into consideration (with or without a control variable). The level of financial understanding of small business managers in Cameroon is thus unaffected by knowing about and use of Fintech instruments. The theory of trust, which emphasizes the hesitation to adopt new technologies because of a lack of information brought on by information asymmetry, might be used to support this finding. According to Nguyen (2022), the current state of financial literacy is unaffected by Fintech. According to Yeo and Fisher (2017), customers who lack financial literacy are not fascinated by Fintech. Contradictory inferences might be made regarding financial literacy. Herdinata (2020) discovers that financial literacy has no impact on the adoption of Fintech.

### Fintech and Financial Capability.

**Table 15: Fintech and Financial Skill**

variable	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)
Panel A: With control variables					Panel B: Without control variables			
Constant	0.275*** (0.001)	0.078	3.518		0.510*** (0.000)	0.024	21.623	
Fintech knowledge	-0.211** (0.024)	0.093	-2.270	0.950 (1.053)	-0.287*** (0.002)	0.093	-3.078	0.992 (1.008)
Frequency of use	0.300** (0.013)	0.120	2.507	0.970 (1.031)	0.173** (0.018)	0.112	1.989	0.992 (1.008)
Activity sector	0.044* (0.095)	0.026	1.680	0.959 (1.042)	/	/	/	/
TO	0.053*** (0.000)	0.011	4.738	0.790 (1.266)	/	/	/	/
Company age	0.001 (0.978)	0.013	0.027	0.805 (1.242)	/	/	/	/
Model Adjustment	R <sup>2</sup> = 0.217; Adjusted R <sup>2</sup> = 0.195; Standard error = 0.189; DW = 1.808; F = 9.758***; Pval = 0.000				R <sup>2</sup> = 0.195; Adjusted R <sup>2</sup> = 0.150; Standard error = 0.182; DW = 1.883; F = 6.423***; Pval = 0.002			

*Note: The dependent variable is financial literacy. \*, \*\*, \*\*\*, indicate significance at 10%, 5% and 1% respectively*

The findings in Table 15 demonstrate that when financial capability is considered as a financial literacy variable, the quality of the model improved because Fintech accounts for at least 15% of it. At a 1% level, the Fisher statistic is significant. At the conventional level, company's sector of activity and turnover are also significant.

Additionally, we observe that the coefficient of financial knowledge is negative and significant for both estimated models (with and without control variables). Therefore, the less proficient in financial affairs, the more informed they are about the existence of Fintech technologies. The inability of individuals in developing nations to adopt new technologies could explain this result. Even though financial market in Cameroon has existed for more than 15 years,

companies are still reluctant to be listed there. This implies that it will be difficult to learn about this financial innovation that is boosted by ICT works. Furthermore, Bidiassé and Mvogo (2019) find that the network effect, accessibility to information, and proximity to the financial innovation tool hurt the adoption of this device. According to Kadje et al. (2022), financial payment technology adoption is hampered by the cost of using them. This outcome, which appears to defy the principle of technology acceptance, can be explained by this study's context, where there is a proven resistance to new technologies about company management.

The findings in Table 15 also show a strong and positive relationship between financial literacy and the frequency of using Fintech technologies. This implies that as one uses Fintech technologies, their level of financial literacy rises. According to Sadigov et al. (2020), there is a direct correlation between the demand for Fintech services and financial literacy.

## Fintech and Self-Confidence

**Table 16: Fintech and Financial Self-Confidence**

variable	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)	Coef (P-Value)	Standard error	t-stat	Tolerance (VIF)
Panel A: With control variables					Panel B: Without control variables			
Constant	0.493*** (0.000)	0.068	7.238		0.543*** (0.000)	0.019	27.876	
Fintech knowledge	0.088 (0.279)	0.081	1.085	0.950 (1.053)	0.062 (0.424)	0.077	0.802	0.992 (1.008)
Frequency of use	0.331*** (0.002)	0.104	3.171	0.970 (1.031)	0.255*** (0.006)	0.092	2.768	0.992 (1.008)
Activity sector	0.019** (0.417)	0.023	0.813	0.959 (1.042)	/	/	/	/
CA	0.001 (0.940)	0.010	0.076	0.790 (1.266)	/	/	/	/
Company age	0.002 (0.885)	0.011	0.145	0.805 (1.242)	/	/	/	/
Model Adjustment	R <sup>2</sup> = 0.062; Adjusted R <sup>2</sup> = 0.036; Standard error = 0.165; DW = 1.697; F = 2.346**; Pval = 0.043				R <sup>2</sup> = 0.037; Adjusted R <sup>2</sup> = 0.028; Standard error = 0.168; DW = 1.787; F = 3.983**; Pval = 0.020			

*Note: The dependent variable is financial Self-Confidence. \*, \*\*, \*\*\*, indicate significance at 10%, 5% and 1% respectively*

Table 16 demonstrates that, in addition to the constant and the sector of activity, the frequency of use maintains its positive sign and significance when referring to the link with financial confidence. As a result, business managers who regularly use financial technology tools are better able to take financial risks.

Overall, we show that the usage of Fintech technologies increases financial literacy in small firms in Cameroon, contrary to knowledge, which does not always result in adoption. This outcome is consistent with findings from Liu et al., (2020) and Jünger and Mietzner (2020).

### 4.2.2. Robustness analysis: Alternative estimation method.

The previous findings are obtained using a standard multiple linear regression. This subsection's objective is to ensure that the results are unaffected by the estimation approach adopted. To do this, top-down linear regression is performed as another estimating method. This involves starting with the prior model and reestimating the data by progressively removing variables. The top-down regression automatically considers the mathematical contribution of each variable in order to move forward with the elimination, in contrast to the bottom-up regression and the regression with forced entry, which depend on the researcher's involvement in choosing the variables. To look at specified stability in the model, step by step, the variables with no substantial impact are removed. Depending on the considered aspect of financial literacy, the same method is used for the previous four models.

**Table 17: Fintech and Financial Literacy: Top-Down Linear estimation results**

Model	Coef	Standard error	t-stat	P-Value	Tolerance (VIF)	Model
Constant	0.454***	0.053	8.522	0.000		R <sup>2</sup> = 0.108 ;
Fintech knowledge	-0.091	0.063	-1.431	0.154	0.950 (1.053)	R <sup>2</sup> A = 0.083 ;
Frequency of use	0.136*	0.082	1.667	0.097	0.970 (1.031)	ES= 0.12954 ;
Sector Activity	0.049***	0.018	2.689	0.008	0.959 (1.042)	F = 4.284*** ;
CA	0.019**	0.008	2.457	0.015	0.790 (1.266)	Pval = 0.001
Age Company	0.001	0.009	-0.052	0.959	0.805 (1.242)	
Constant	0.453***	0.051	8.957	0.000		R <sup>2</sup> = 0.108 ;
Digital Knowledge	-0.091	0.063	-1.437	0.152	0.960 (1.041)	R <sup>2</sup> A = 0.088 ;
Frequency of use	0.136*	0.081	1.676	0.095	0.972 (1.029)	ES= 0.12918 ;
Sector Activity	0.049***	0.018	2.702	0.008	0.961 (1.041)	F = 5.384*** ;
CA	0.019***	0.007	2.674	0.008	0.947 (1.056)	Pval = 0.000
Constant	0.429***	0.048	8.963	0.000		R <sup>2</sup> = 0.098 ;
Frequency of use	0.149*	0.081	1.843	0.067	0.984 (1.016)	R <sup>2</sup> A = 0.083 ;
Sector Activity	0.050***	0.018	2.787	0.006	0.965 (1.037)	ES= 0.12957 ;
CA	0.020***	0.007	2.914	0.004	0.968 (1.033)	DW = 1.688
						F = 6.452*** ;
						Pval = 0.000

*Note: The dependent variable is financial literacy. \*, \*\*, \*\*\*, indicate significance at the 10%, 5% and 1% levels respectively.*

Table 17's results suggest that when the overall financial literacy index is the dependent variable, only three iterations are required for the model to reach stability. At this point, it is clear that the outcomes are closely comparable to those in Table 13 in that the variables that have remained important and have not been dropped from the model are the sector, turnover, and particularly frequency of usage. This indicates that these factors are the ones that most significantly contribute to the explanation of financial literacy among small business owners in Cameroon.

**Table 18: Fintech and financial knowledge: Results of the top-down linear regression**

Model	Coef	Standard error	t-stat	P-Value	Tolerance (VIF)	Model
Constant	0.512***	0.077	6.633	0.000		R <sup>2</sup> = 0.019;
Fintech knowledge	-0.081	0.092	-0.876	0.382	0.950 (1.053)	R <sup>2</sup> A = -0.009;
Frequency of use	-0.154	0.118	-1.298	0.196	0.970 (1.031)	ES= 0.18784;
Activity sector	-0.003	0.026	-0.114	0.910	0.959 (1.042)	F = 0.691;
Sales figures	0.004	0.011	0.351	0.726	0.790 (1.266)	Pval = 0.631
Company age	0.008	0.013	0.638	0.525	0.805 (1.242)	
Constant	0.504***	0.039	12.952	0.000		R <sup>2</sup> = 0.019;
Fintech knowledge	-0.080	0.092	-0.872	0.384	0.954 (1.048)	R <sup>2</sup> A = -0.003;
Frequency of use	-0.155	0.117	-1.319	0.189	0.978 (1.022)	ES= 0.18731;
Sales figures	0.004	0.011	0.371	0.711	0.806 (1.241)	F = 0.865;
Age Company	0.008	0.013	0.645	0.520	0.807 (1.240)	Pval = 0.486
Constant	0.509***	0.037	13.863	0.000		R <sup>2</sup> = 0.018;
Fintech knowledge	-0.083	0.091	-0.910	0.364	0.961 (1.041)	R <sup>2</sup> A = 0.002;
Frequency of use	-0.152	0.117	-1.299	0.196	0.983 (1.017)	ES= 0.18686;
Company age	0.010	0.012	0.882	0.379	0.976 (1.024)	F = 1.113;
						Pval = 0.345
Constant	0.534***	0.023	23.076	0.000		R <sup>2</sup> = 0.014;
Fintech knowledge	-0.095	0.090	-1.058	0.292	0.984 (1.016)	R <sup>2</sup> A = 0.003;
Frequency of use	-0.155	0.117	-1.327	0.186	0.984 (1.016)	ES= 0.18674;
						F = 1.283;
						Pval = 0.280
Constant	0.516***	0.016	33.229	0.000		R <sup>2</sup> = 0.008;
Frequency of use	-0.139	0.116	-1.202	0.231	1.000 (1.000)	R <sup>2</sup> A = 0.002;
						ES= 0.12957 ;
						F = 1.445;
						Pval = 0.231
Constant	0.508***	0.014	36.616	0.000		R <sup>2</sup> = 0.001 ;
						R <sup>2</sup> A = 0.001;
						ES= 0.18703;

*Note: The dependent variable is financial knowledge. \*, \*\*, \*\*\*, indicate significance at 10%, 5% and 1% respectively.*

The same analyses are carried out again when financial knowledge is the dependent variable, and after six iterations, the findings in Table 18 demonstrate that the finding is the only significant parameter in the model. This conclusion is in line with those in Table 14, which shows that none of the considered variables significantly affect financial literacy. This is against the findings of Lontchi et al. (2023). As a result, we conclude that this less-than-satisfactory result is not caused by the estimation technique, and that, on the one hand, understanding of technological financial tools and, on the other, the frequency of their usage has no effect on the level of financial knowledge of small business managers in Cameroon.



**Table 19: Fintech and financial skill: results of the top-down linear regression**

Model	Coef	Standard error	t-stat	P-Value	Tolerance (VIF)	Model
Constant	0,275***	0.078	3.518	0.001		R <sup>2</sup> = 0.217;
Fintech knowledge	-0.211**	0.093	-2.270	0.024	0.950 (1.053)	R <sup>2</sup> A = -0.195;
Frequency of use	0.300**	0.120	2.507	0.013	0.970 (1.031)	ES= 0.18989;
Activity sector	0.044*	0.026	1.680	0.095	0.959 (1.042)	F = 9.758***;
CA	0.053***	0.011	4.738	0.000	0.790 (1.266)	Pval = 0.000
Company age	0.001	0.013	.027	0.978	0.805 (1.242)	
Constant	0.275***	0.074	3.713	0.000		R <sup>2</sup> = -0.217;
Fintech knowledge	-0.212**	0.092	-2.292	0.023	0.960 (1.041)	R <sup>2</sup> A = -0.199;
Frequency of use	0.300**	0.119	2.516	0.013	0.972 (1.029)	ES= 0.18936;
Activity sector	0.044*	0.026	1.685	0.094	0.961 (1.041)	DW = 1.811
CA	0.053***	0.010	5.213	0.000	0.947 (1.056)	F = 12.267***;
						Pval = 0.000

*Note: The dependent variable is financial capability. \*, \*\*, \*\*\*, indicate significance at 10%, 5% and 1% respectively*

Table 19 demonstrates that a single iteration permits the estimated model to be stable. All of the variables considered, except the age of the company, significantly explain the financial confidence of small business managers in Cameroon, similar to Table 15. The usage frequency (knowledge of the existence) of Fintech technologies continues to have a positive (negative) impact. The negative results are in line with Yoshino et al. (2020) and demonstrates that the outcome is robust to the estimating method.

**Table 20: Fintech and Financial Self-Confidence: Results of the Top-Down Linear Estimation**

Model	Coef	Standard error	t-stat	P-Value	Tolerance (VIF)	Model
Constant	0,493***	0.068	7.238	0.000		R <sup>2</sup> = 0.062;
Fintech knowledge	0.088	0.081	1.085	0.279	0.950 (1.053)	R <sup>2</sup> A = 0.036;
Frequency of use	0.331***	0.104	3.171	0.002	0.970 (1.031)	ES= 0.16570;
Activity sector	0.019	0.023	0.813	0.417	0.959 (1.042)	F = 0.691**;
Sales figures	0.001	0.010	0.076	0.940	0.790 (1.266)	Pval = 0.043
Company age	0.002	0.011	0.145	0.885	0.805 (1.242)	
Constant	0.494***	0.065	7.591	0.000		R <sup>2</sup> = 0.062;
Fintech knowledge	0.088	0.081	1.086	0.279	0.958 (1.044)	R <sup>2</sup> A = 0.041;
Frequency of use	0.331***	0.104	3.196	0.002	0.976 (1.025)	ES= 0.16524;
Activity sector	0.019	0.023	0.813	0.417	0.978 (1.022)	F = 2.948**;
Company age	0.002	0.010	0.193	0.848	0.965 (1.036)	Pval = 0.022
Constant	0.500***	0.057	8.779	0.000		R <sup>2</sup> = 0.062;
Fintech knowledge	0.085	0.079	1.072	0.285	0.983 (1.018)	R <sup>2</sup> A = 0.046;
Frequency of use	0.331***	0.103	3.201	0.002	0.976 (1.024)	ES= 0.16479;
Activity sector	0.018	0.023	0.799	0.426	0.990 (1.010)	F = 3.940***;
						Pval = 0.004
Constant	0.543***	0.020	26.596	0.000		R <sup>2</sup> = 0.059;
Fintech knowledge	0.083	0.079	1.045	0.298	0.984 (1.016)	R <sup>2</sup> A = 0.048;
Frequency of use	0.338***	0.103	3.287	0.001	0.984 (1.016)	ES= 0.16462;
						F = 5.602***;
						Pval = 0.004
(Constant)	0.559***	0.014	40.804	0.000		R <sup>2</sup> = 0.053;
Frequency of use	0.325***	0.102	3.179	0.002	1.000 (1.000)	R <sup>2</sup> A = 0.048;
						ES= 0.16467;
						DW = 1.774
						F = 10.108***;
						Pval = 0.002

*Note: The dependent variable is financial self-confidence. \*, \*\*, \*\*\*, indicate significance at 10%, 5% and 1% respectively*

Table 20 indicates that the only relevant explanatory variable for self-confidence after five iterations is frequency of use. This implies that, among all the considered factors, the frequency of use is the one that best in explaining financial literacy.

Finally, our robustness analysis demonstrates that the frequency of usage of technological financial instruments, as opposed to knowledge of their existence, is what contributes to ameliorate the level of financial literacy of small business managers in Cameroon.

## **5- Conclusion**

The emergence of ICT in recent years has revolutionized the financial industry, resulting in the creation of more complex financial products. Financial literacy is improved as a result of mastering these instruments. This study was aimed at determining how Fintech tools affect the financial literacy of small business managers in Cameroon. To this end, the information was gathered through a survey by the Center for Research and Study in Management and Economics (CRSME), as a component of a project on financial inclusion of Cameroonian firms. The survey was carried out Between May and July 2020, in the cities of Douala, Yaoundé, Dschang, and Bafoussam. Three aspects of financial literacy were considered precisely financial knowledge, financial competence, and financial self-confidence. Fintech refers to the fact of being aware of the existence and usage frequency of relevant financial tools. Considering their multidimensional aspect evaluated on a Likert scale, these variables are first subjected to a Principal Component Analysis and indices are built. Statistical and econometric approaches such as flat sorting, traditional multiple linear OLS, and top-down multiple linear regressions were used to empirically confirm the relationship between Fintech and financial literacy.

Globally, two main results are found. First, there is a direct and positive correlation between the frequency using of Fintech instruments and the financial literacy of managers of small businesses in Cameroon. However, the effect is negative and sometimes significant when considering the existence of such tools. The study concludes that, in contrast to the latter Fintech variable, the frequency of using of digital finance instruments is more likely to increase financial literacy. Second, compared to financial knowledge, the significance of this association increases when financial literacy is measured by financial competence and confidence.

These results are in line with the theories considered in this research, including the economic theory of trust, the diffusion of innovation theory, the theory of technology acceptance and Usage, and the theory of technology transfer. This study enables us to conclude that Fintech is

a crucial tool for educating young businesses and business owners about finance. Financial digitalization policies can support this. This study therefore provides evidence that the use of financial technologies improves the financial literacy of small business' managers in Cameroon. This conclusion indicates that, at a managerial level, small business managers in Cameroon should increase their usage of finance-related new technologies. Therefore, they need to use financial technology solutions such as mobile payments, payment terminals, and bank accounts in their businesses, as these enable them, through automatic or formal learning, to considerably improve their level of financial knowledge, financial competence, and, above all, confidence in financial decision-making. Furthermore, to take advantage of the positive leverage, governments and all stakeholders in the financial system should create laws that promote technological innovation and encourage its utilization. The connection between Fintech and financial inclusion in small businesses is a main topic of future research. With the aim of identifying potential direct and indirect connections, another study might examine the interactions among Fintech, financial literacy, and financial inclusion (e.g., using mediation analysis). The effect of COVID-19 on the adoption of Fintech instruments and financial inclusion on the one hand and, on the other, the impact of this pandemic on the relationship between the two are also interesting research areas.

### **Statements and Declarations**

- 1. Availability of data and materials:** The datasets used in this research are available from the corresponding author upon reasonable request.
- 2. Competing interests:** *The authors declare that they have no competing interests*
- 3. Funding:** No funding was received for conducting this study.
- 4. Ethical Approval:** Humans have voluntarily taken part in the questionnaire survey in order to produce this article.

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## Appendix

**Table 1: Operationalization of Financial Literacy variable**

Variables	Please indicate your level of agreement with the following statements. Please select the number corresponding to your answer. 1- Strongly disagree; 2- Disagree; 3- Somewhat agree; 4- Agree; 5- Strongly agree	Code	Authors
Financial Literacy	It is a good idea for someone to have several bank accounts	KNOW1	Morin <i>et al</i> (2012), Knowstans (2015), Lusardi <i>et al.</i> , (2010), Musundi, (2014) Amisi, (2012)
	You have a good knowledge of the existence of banking products	KNOW2	
	You regularly follow the financial news	KNOW3	
	You have a good knowledge of insurance products	KNOW4	
	The expenses you personally incur are wasteful in nature	KNOW5	
	You have a good knowledge of the new payment methods (Mobile money, Express Union mobile money, credit card, online payment)	KNOW6	
Financial competencies	You have a good knowledge of the functioning of bank accounts	COM1	Lusardi and Mitchell (2015)
	You have a good expertise of bank credit and overdraft operations	COM2	
	You have a good understanding of how savings accounts work	COM3	
	You have a good understanding of the principle of bank interest calculation	COM4	
	You always achieve your personal budget goals	COM5	
	You always collect the maximum level of information on financial products before committing yourself to a financial operation	COM6	
	You Knowsider several sources of information before your financial choices	COM7	
	You have sufficient savings for your children's education	COM8	
	You have sufficient savings for your retirement	COM9	
	You have prepared financial strategies for your retirement	COM10	
	You have a sufficient level of savings for illness	COM11	
Self-Confidence	You have a good comprehension of the financial difficulties you face	CONF1	
	When it comes to managing your personal finances, you always take advice	CONF2	
	You trust the staff of financial services and institutions (MFIs, banks, etc.) in Cameroon	CONF3	
	You are autonomous in managing your personal finances	CONF4	
	You take risks in the management of your personal finances, investments, ...	CONF5	
	You regret most of your financial decisions	CONF6	
	You have a high level of personal confidence in managing your personal finances	CONF7	
	You always pay your current transactions on time (no debt to a third party)	CONF8	



**Table 2: Knowledge of the existence and use of digital finance instruments**

Variables	Variable measurement items	CODE	Authors
<b>Please indicate your level of agreement with the following statements. Please select the number corresponding to your answer. 1-Not at all; 2-Very little; 3-Moderately; 4-Very well, 5-perfect</b>			
<b>Fintech tools</b>	You are familiar with mobile money as a means of payment for day-to-day operations in your company	Fint 1	Morgan (2021);
	You know that the credit card can be used to pay for business transactions	Fint 2	
	You know that internet can be used to pay some company's transactions	Fint 3	
	You know online donations (internet) can be used to collect your business' funding	Fint 4	Nguyen (2022)
	You know that online (internet) loans can be used to collect your business' funding	Fint 5	
	You know that you can meet partners on the internet who formally participate in the financing of your business	Fint 6	Pollari (2016)
	You know that cryptocurrency is a digital currency that can help you making various transactions	Fint 7	
	You know that there are banking applications/software that allow you to do certain transactions via your phone or computer	Fint 8	
<b>Please indicate your level of agreement with the following statements. Please select the number corresponding to your answer. 1- Strongly disagree; 2- Disagree; 3- Somewhat agree; 4- Agree; 5- Strongly agree</b>			
<b>Frequency of use</b>	You use mobile payment (mobile money) as a means of payment for operations in your company	FREQ1	Moenjak et al., (2020)
	You use the credit card as a means of payment within your company	FREQ 2	
	You use internet payment for some of your company's transaction	FREQ 3	Frame et al. (2019)
	You use crowdfunding as a means of financing for your business	FREQ 4	
	You use online lending as an informal financing procedure for your business	FREQ 5	
	You use online investing partners to develop your business	FREQ 6	
	You use the crypto-currency as a digital currency that can help you make your various transactions	FREQ 7	
	You use various banking applications that allow you to perform some transactions	FREQ 8	

**Table 4: PCA of Financial literacy Variable**

	Factors					
	1	2	3	4	5	6
KNOW 2	0.772	0.283	-0.005	-0.068	0.029	0.050
KNOW 4	0.757	0.210	-0.176	0.092	0.020	-0.039
KNOW 5	0.052	-0.135	0.631	0.211	0.053	0.262
COM 1	0.827	0.087	0.183	-0.098	-0.059	-0.041
COM 2	0.828	0.194	-0.047	0.041	0.069	-0.076
COM 3	0.790	0.019	0.160	0.117	0.143	-0.079
COM 4	0.780	0.242	0.115	0.148	-0.002	-0.052
COM 6	0.117	0.091	0.210	0.903	0.079	0.052
COM 7	0.026	0.103	0.147	0.909	0.115	-0.018
COM 8	0.159	0.904	-0.001	0.050	0.091	0.040
COM 9	0.185	0.891	0.107	0.157	-0.042	0.059
COM 10	0.203	0.683	0.020	0.043	0.220	-0.232
COM 11	0.352	0.722	0.119	0.002	0.062	0.110
CONF 2	0.216	0.199	0.420	0.228	0.379	0.141
CONF 3	0.292	0.113	0.656	0.032	-0.142	-0.094
CONF 4	-0.078	0.005	0.103	0.227	0.780	-0.008
CONF 5	0.238	0.204	-0.352	-0.182	0.585	0.000
CONF 6	-0.168	0.039	-0.013	0.031	0.009	0.889
CONF 7	0.032	0.170	0.532	0.076	0.503	-0.030
CONF 8	-0.287	0.167	0.641	0.176	0.062	-0.286
Eigenvalues	5.724	2.830	1.889	1.268	1.156	1.004
% of explained variance	21.607	15.082	10.154	9.758	7.428	5.326
Cumulative % explained variance	21.607	36.689	46.843	56.601	64.029	69.354
KMO Index			0.811			
Barlett Chi Sphericity Test			1701.288	0.000		

**Table 5: PCA of financial literacy global variable**

	Factors		
	1	2	
KNOW 1	0.557		0.451
KNOW 2	0.863		0.002
KNOW 4	0.874		-0.115
KNOW 5	-0.094		0.924
Eigenvalues	1.832		1.065
% of explained variance	45.664		26.772
Cumulative % explained variance	45.664		72.435
KMO Index	0.570		
Barlett Chi Sphericity Test	126.498		0.000
Cronbach's Alpha			0.546

**Table 6: PCA of financial Knowledge variable**

	Factors			
	1	2	3	
COM 1	0.125	0.881		-0.047
COM 2	0.267	0.816		0.012
COM 3	0.068	0.824		0.184
COM 4	0.260	0.783		0.225
COM 5	0.286	0.214		0.469
COM 6	0.065	0.087		0.932
COM 7	0.069	0.008		0.919
COM 8	0.917	0.082		0.088
COM 9	0.901	0.134		0.187
COM 10	0.729	0.187		0.065
COM 11	0.759	0.277		0.089
Eigenvalues	4.486	1.837		1.684
% of explained variance	27.353	26.580		18.864
Cumulative % explained variance	27.353	53.933		72.797
KMO Index		792		
Barlett Chi Sphericity Test		1181.810		0.000
Cronbach's Alpha		0.848		

**Table 7: PCA of Financial self-Confidence Variable**

	Factors			
	1	2	3	
CONF 4	0.744	0.275		0.136
CONF 5	0.056	0.905		-0.056
CONF6	-0.010	-0.025		0.984
CONF 7	0.808	-0.077		-0.064
CONF 8	0.620	-0.475		-0.161
Eigenvalues	1.622	1.115		1.003
% of explained variance	31.860	22.541		20.393
Cumulative % explained variance	31.860	54.401		74.794
KMO Index		0.563		
Barlett Chi Sphericity Test		65.338		0.000
Cronbach's Alpha		0.581		

**Table 8: PCA of knowledge of Fintech tools variable**

	Factors	
	1	2
Fint 1	0.010	0.999
Fint 3	0.753	0.024
Fint 4	0.895	-0.050
Fint 5	0.926	0.078
Fint 6	0.914	-0.017
Eigenvalues	3.062	1.007
% of explained variance	61.225	20.157
Cumulative % explained variance	61.225	81.382
KMO Index	0.797	
Barlett Chi Sphericity Test	554.848	0.000
Cronbach's Alpha	0.838	

**Table 9: PCA of frequency of use of Fintech tools Variable**

	Factors		
	1	2	3
FREQ 1	-0.202	-0.100	0.705
FREQ 2	0.029	0.830	0.115
FREQ 3	0.199	0.387	0.639
FREQ 4	0.834	0.114	-0.106
FREQ 5	0.878	0.065	-0.099
FREQ 6	0.194	0.726	-0.328
FREQ 7	0.674	0.135	0.476
FREQ 8	0.081	0.626	0.353
Eigenvalues	2.554	1.514	1.177
% of explained variance	25.571	22.520	17.475
Cumulative % explained variance	25.571	48.091	65.566
KMO Index	0.596		
Barlett Chi Sphericity Test	366.169	0.000	
Cronbach's Alpha	0.506		