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Determinants of Social Media-based Digital Financing among Micro-Technological Firms in Ilaro Town, Nigeria.

By

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Abstract

The increasing financing gap among micro and small firms in developing countries indicates that conventional financing approaches have limited capacities. This study, therefore, attempts to examine the factors that determine the usage of social media-based digital financing as an alternative source of finance among micro-technological firms in Ilaro town, Yewa South Local Government area of Ogun State. The study serves as a follow-up study to a particular baseline study which had hitherto employed a random sampling technique to select 143 owners and managers of micro-technical firms in the study area. Empirical evidence from logit regression and marginal effects analysis reveals that a one-unit increase in financial literacy and networking significantly increases the probability that micro-technological firms in Ilaro town use social-media financing by 0.40 and 0.13 respectively. However, one naira increase in the transaction cost incurred for social-media financing significantly causes a 0.42 decrease in the probability of using digital means. The study, therefore, affirms that financial literacy, networking, and transaction costs are significant drivers of intention to use social-media-based digital financing among owners and managers of micro-technological firms in Ilaro town of Yewa South Local Government area, Ogun State. It recommends improved networking and financial literacy of owners and managers of micro-technological firms in the study area. Finally, digital financial services providers are urged to lower transaction costs associated with the use of social-media financing by micro-enterprises.

Keywords: Micro-firm, social media, digital financing, logit model

Introduction

Governments, financial institutions, and development organizations including non-profit organizations are increasingly recognizing the importance of digital financing for businesses. Digital finance which involves using an internet platform to raise and use funds provides a convenient way to ease financial constraints that firms especially micro-enterprises often face from conventional financial institutions including microfinance banks. Consequently, digital financing among microbusinesses is considered a tool to reduce income inequality and contribute to the economic growth of countries (Johri *et al.*, 2024; Liu *et al.* 2022; Ozturk & Ullah, 2022). The benefits offered by digital finance have resultantly motivated various formal financial institutions and financial technology firms to launch diverse digital financial products and services for optimising their investment returns. Microfirms are the most common forms of business in many countries particularly developing economies as they are easy to form and require less capital to set up. They provide the bulk of job opportunities in a developing economy like Nigeria and thus promote economic growth (Anthanasius Fomum & Opperman, 2023; Juhri *et al.*, 2024). However, many microenterprises in developing countries still face acute shortages of funds supply despite the relatively small capital requirement for establishment (International Finance Corporation, 2017; Juhri *et al.*, 2024). The funding gap can detrimentally affect the growth and development of micro-firms in these countries. Meanwhile, the increasing use of smartphones among managers and owners of these firms offers a great chance to mitigate such monumental financial supply and demand imbalances. This is because many financial services, such as mobile money, can be provided through mobile smartphones. Digital wallets that allow users to send and receive payment for services and pay bills can also be provided by fintech firms and banks for the convenience of microenterprises.

However, investigating factors that determine the use of digital financing to raise funds among micro-enterprises in developing countries, particularly in Nigeria, where more than 35% of the population engages in micro and small enterprises, has been relatively unexplored. Such a lack of focus is even more precarious for rural micro firms in Nigeria, where almost all the inhabitants engage in smallholding agriculture, small trading and menial services. This study, therefore, attempts to examine determinants of digital financing among micro-firms in Ilaro town (in Nigeria) that wholly engage in technology-related businesses. These business categories include phone repair, computer repair, and business centres. Ilaro town is the capital of Yewa South Local Government in Ogun State, Nigeria. This study explicitly examines determinants of social media-based digital financing among the research subjects due to the increasing use and familiarity of social media platforms among micro-firms in urban and rural areas of Nigeria. The study is organized as follows. The first section introduces the research and its context. The second section contains a review of related literature in the field, followed by the methodological approach adopted by the study in section three. In section four, observed results were presented using a Table, while the research ends with a conclusion and recommendations in section five.

Literature Review

Digital finance is an increasingly important tool for achieving financial inclusion, reducing inequality and promoting economic advancement. Digital finance is a technological-driven financial interface between surplus spenders and deficit users. It is a means which allows a credit entity or financial firm to provide financial services and products to customers/clients while

leveraging technology. A good example of technology that financial organisations or credit institutions use to offer digital financial services in recent times among businesses is smartphones. However, in many instances, digital financing platforms often require internet-enabled smartphones. One of the models through which digital financing can be obtained by businesses, such as micro and small firms, is the social media finance model. Social media aids communication between two or more firms or between businesses and people while using certain platforms. Some of these platforms include but are not limited to Facebook, Twitter (or X), WhatsApp, Google, Instagram, Instabloc, Nairaland (a Nigerian content), LinkedIn, YouTube, TikTok, etc.

Some international financial services companies like JPMorgan Chase, BlackRock, American Express, Goldman Sachs and Charles Schwab are leveraging the opportunities presented by social media platforms to enhance customer experience, build brand, trust and loyalty. A good number of finances that can be raised through social media platforms are crowdfunding and donations. Crowdfunding is a type of funding raised via online (or social media) from a large number of interested people, purposely for a specific project or business need. It can be accessed from websites such as GoFundMe, Kickstarter and Indiegogo, and these websites can explore social media platforms to offer this financial service to small firms and microenterprises. Micro-enterprises constitute a large chunk of employment in almost every developing country's economy. They create, along with small enterprises, more job opportunities than large firms in developing countries and thus, contribute substantially to the economic growth of these economies (Anthanasius Fomum & Opperman, 2023; Johri *et al.*, 2024). However, despite the critical economic roles played by micro-firms funding gap issue is still rife among them in developing countries like Nigeria.

Meanwhile, according to the extant literature, micro-firms can take advantage of the use of certain social media to raise needed funds. They explore digital financing for working capital management and expansion of business; thereby, allowing them to effectively and efficiently contend with large firms (Vatanasakdakul, Aoun, Hidayah & Putra, 2020). However, the extent of adoption of social-media digital finance depends on certain factors. Anane and Nie (2022) classified these factors as incorporating factors that include effort expectancy, level of awareness, facilitating conditions, cost of transaction, security and privacy, and self-efficacy. The extent of networking and users' financial literacy can also affect the level of adoption and usage of digital finance. This study considers the Technology Acceptance Model (TAM) developed by Davis (1989) as an efficient theory to explain factors that influence the decision of micro-enterprises (in Ilaro town) through their owners to use social-media-based digital finance.

The theory, TAM, is a behavioural theoretical approach which explains the rationale behind people's decisions regarding acceptance or rejection of new technology. According to the TAM proposition, people's potential decision to accept or reject new technology is based on three factors, which include intention to use, use easeness and the perceived utility of the newly introduced technology. In other words, micro-enterprises in the study area will consider these three essential conditions of TAM while deciding on whether to use social-media digital financing platforms. Empirically, some works have been conducted on the use of digital financing among businesses in developing countries (e.g. Sharma *et al.* 2023a; Chen & Zhang, 2021; Zhou *et al.* 2023; Chen *et al.* 2022a; Johri *et al.*, 2024; Abdulmajeed *et al.*, 2024; Saka & Akinde, 2024). Apart from the research by Abdulmajeed *et al.* (2024), the most common evidence provided by other studies is

that digital financing improves the financial condition of micro and small firms in these economies. However, while many of these studies have found a positive and significant relationship between digital financing and the performance of micro and small businesses only one study (Saka & Akinde, 2024) specifically focused on the social-media finance model as an aspect of digital financing. The study, however, failed to consider determinants of the use of social-media digital financing in its coverage and thus, provides ground for the current study. In other words, this current study serves as an extension work to earlier work by Saka and Akinde (2024).

Methodology

As noted in the concluding literature review part, this current study is an extension work to an earlier published study by Saka and Akinde (2024). The cross-sectional baseline study was similarly conducted among TVET-enabled microenterprises (here called micro-technological firms) in Ilaro town from Yewa South Local Government area of Ogun State. Consequently, all the methodological approaches in Saka and Akinde (2024) are followed by the current study except for model specification and analytical methods. In that previous study, a simple random sampling technique was employed to select a sample of 143 micro-technological firms from four business cluster areas. These cluster areas include Federal Polytechnic, Ilaro market cluster, Deuteronomy cluster, Orita area and Library cluster. The study administered simple questionnaires among the research interests from March 20 to April 24, 2024, and the collected data serves as data for the current study. Interestingly, the data collected by the baseline study contains information on determinants and the use of the social-media financing model. Thus, the baseline study provides a better guide for the current study.

Furthermore, the scientific response to what factors determine the usage of the social-media-based digital financing model among micro-technological firms in Ilaro town is examined via the binomial logit model technique. The study adopts the logit model specified in Mwonge and Naho (2021) and subsequently adjusted it. The binomial logit model specification procedures are given thus:

$$P_i = F(Z_i) = F(\alpha + \sum \beta_i X_i) = \frac{1}{1 + e^{-z}} \dots (1)$$

Where,

P_i = Probability that a farmer is a credit user or non-credit user given a set of predictors (X_i)

e = natural logarithm base (2.7183)

The odds ratio of equation (1) is taken as:

$$\left(\frac{P_i}{1 - P_i} \right) = \left(\frac{1 + e^{z_i}}{1 + e^{-z_i}} \right) = e^{z_i} \dots (2)$$

Equation 1 is adjusted and expanded in equation 3 as:

$$\text{logit}(USE_i) = \ln \left(\frac{USE_i}{1 - USE_i} \right) = \alpha + \beta_1 AWN_i + \beta_2 FIL_i + \beta_3 NET_i + \beta_4 TRC_i \dots (3)$$

Where,

USE = Use of social-media financing model (a binary outcome with “1” = use and “0” = not use);

AWN = Awareness level; FIL = Financial literacy; TRC = Transaction cost

While awareness of existing digital finance and transaction costs have been observed as determinants of digital financing usage among micro and small firms in developing countries (Anane & Nie, 2022) factors such as financial literacy and networking are relatively unexamined.

The Marginal Effect (ME) method is used for the interpretation of estimated coefficients in Equation 3. By expectation, the study hopes to arrive at positive and significant relationships between all the observed determinants and the usage of the social-media financing model by micro-technological firms in the study area. Mathematically, this is expressed as: $\beta_1 \dots \beta_4 > 0$.

Presentation of Results

The estimation outcomes of logistic regression and ME analyses are presented in Table 1. Logistic regression and ME estimations on 134 observational data were performed with STATA 12.1 serving as the statistical software. The results are presented as:

Table 1: Marginal Effect Analysis of Determinants of Digital Financing (Social-media Finance Model)

<i>Variable</i> <i>DV:</i> <i>USE</i>	<i>Coef.</i>	<i>Std. Error</i>	<i>p-value</i>
AWN	.05	.14	0.70
FIL	.49	.21	0.01**
NET	.13	.16	0.00**
TRC	-.42	-.24	0.00**
_cons	0.70	.66	0.27
F-statistics (p-value)			0.04**
Pseudo R-squared		0.58	
No. of Observations		134	

Note: coef = coefficient; std. error = standard error; ** denotes 5% significance level
Reference category ("0" = no use)

Source: Authors' Computations from STATA 12.1 Outputs (2025)

Interpretation and Discussion of Results

The results presented in Table 1 illustrate the ME estimation outcomes of responses provided by the managers and owners of micro-technological firms selected from four business areas in Ilaro town. The direction of coefficient estimates under logistic regression and ME analysis always yield a similar sign. However, interpretation of estimates magnitudes cannot be performed using logistic regression because it only produces the effect of a predictor on the log of the outcome variable (Perrailon, 2019). Hence, the ME technique is used for the interpretation of results. From Table 1, the ME result shows that a unit increase in the AWN (awareness level), FIL (financial literacy), and NET (Networking) increases the probability that micro-technological firms in the study area use social-media financing model for running the affairs of their businesses. The result implies that one unit increase in each of three predictors namely awareness, financial literacy, and networking increases the probability that micro-technological firms in Ilaro town will use social-media financing by 0.05; 0.40, and 0.13 respectively.

However, awareness level as a predictor is an insignificant factor in promoting the use of digital financing among the population of micro-firms in the study area. The results suggest that financial literacy and networking are the critical factors that enhance social-media financing usage in the study area. In contrast, the probability that micro-technological firms in the study area use the social-media finance model to finance their operations significantly falls with high transaction

costs. From the result in Table 1, one naira increase in the transaction cost (TRC) incurred for social-media financing significantly causes a 0.42 decrease in the probability of using digital means. While financial literacy and networking substantially increase the probability of using social-media-based digital financing initiatives among micro-technological firms in Ilaro town high transaction cost decreases such probability. The study logit model specified in the methodology section is adjudged by the overall model significance result in Table 1 to be a good fit for the observed data. Also, the pseudo-R-squared value indicates that the observed predictors of the study explained a 58% variation level in the use of digital financing among the sampled micro technical-based firms in the study area. One of the shreds of evidence of this study which confirms the insignificance of high awareness levels to promote the use of social-media financing in the study area is inconsistent with previous results obtained by Anane and Nie (2022) who found that high awareness significantly improves the adoption of digital financial services among firms.

Conclusion and Recommendations

The study affirms that financial literacy, networking, and transaction costs are significant drivers of intention to use social-media-based digital financing among owners and managers of micro-technological firms in Ilaro town of Yewa South Local Government area, Ogun State. However, while financial literacy and networking promote the use of digital financing among micro-firms in Ilaro town higher transaction costs discourage its application. Therefore, the study suggests improvement in the financial literacy of owners and managers of micro-technological firms in the study area. Again, a higher level of networking is required by these owners and managers. Finally, digital financial services providers are urged to lower transaction costs associated with the use of social-media financing by micro-enterprises.

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