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Financial Innovation versus Inclusion and MSMEs Performance in Cameroon: a Sector Analysis

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Abstract

This research aim to make a comparative analysis of financial inclusion and financial innovation effects on Micro, Small and Medium-sized Enterprises (MSMEs) performance in Cameroon. Firstly, it deal with the comparative analysis of banking and mobile money services use on overall and sectorial turnover growth rate by using the ordinary least squares regressions. Secondly, it is the subject of comparative effects analysis of micro finance and banks financing on MSME exports in the context of the use of mobile money services. This latter analysis is done by using Heckman's selection model. Our results show that the use of mobile money improves overall and services turnover unlike banking. Similarly, the association of mobile money with microfinance promotes the likelihood of MSME exports, unlike their association with bank finance. Thus, we recommend a liberalization of the financial sector for the benefit of network operators so that they can also operate in terms of microfinance in Cameroon like their peers from Ghana and Kenya.

Keywords: Financial Innovation; Financial Inclusion; MSME Performance; Cameroon
JEL Classification: G; G18; L20; O55

1. Background

Improving the performance of Micro, Small and Medium Enterprises (MSMEs) is crucial for countries development in general and those of Africa in particular. Indeed, the (Sub-Saharan) Africa countries are characterized by a large number of MSMEs which contribute to the achievement of sustainable development goals by jobs creation, industrialization acceleration, improvement of economic growth and populations' well-being. Thus, MSMEs are vital for Sub-Saharan African countries competitiveness like Cameroon (Koech, 2011; Eniola & Entebang, 2015; Kimani, 2016; Harelimana, 2017).

The understanding of MSMEs concept varies significantly from one country to another and depends on several factors such as the number of employees, the value of fixed assets, the production capacity, the level of technology used, the capital of enterprises, characteristics of the manager as well as the particular problems that MSMEs face (Harabi, 2005). According to the Ministry of SMEs, Social Economy and Arts and Crafts of Cameroon, SMEs are subdivided according to the law into three groups that are, very small or micro enterprises, small enterprises and medium enterprises. SMEs are therefore categorized in the national file on the basis of their number of permanent employees and their turnover. Enterprises are considered micro when they have less than 5 employees and their annual turnover is less than 15 million FCA. Small enterprises are companies with between 6 and 20 permanent employees and turnover between 15 and 100 million FCA. Finally, medium enterprises are those with staff between 21 and 100 employees with a turnover of more than 100 million but less than 1 billion FCA (National Assembly of Cameroon, 2010). Thus, MSMEs performance refers to their ability to achieve objectives such as high profit, a quality product, a large market share, good financial results and survival at a predetermined time using a relevant action strategy (Koontz & Donnell, 2003).

However, there is a high MSME mortality rate of around 85 out of 100 enterprises registered in Africa due to entrepreneurial skills issues and especially the poor access to affordable finance services (Beck & *al.*, 2015). These difficulties notably hamper the increase in turnover as well as the capacity and level of exports of those that survive (Beck & Demirguc-Kunt, 2006). Financial inclusion has then been identified by a number of researchers (Beck & *al.*, 2009; Onaolapo & Odetayo, 2012; Stephen & Sibert, 2014) as a solution to the development of MSMEs.

In fact, financial inclusion corresponds in the context of this work to the possibility that enterprises in difficulty or excluded from traditional services have access to a whole range of useful financial products and services at low cost of needs (transactions, payments, savings, credit and insurance) offered by reliable and responsible providers. Access to a current account is therefore the first step to inclusion (Sarma, 2008; World Bank, 2014; Beck & *al.*, 2015; Tadjudje, 2016). However, the emergence of innovations both in products/services and in delivery mechanisms in Africa in terms of the mobile revolution, makes financial innovation essential for the effectiveness of financial inclusion. Financial innovation is the act of creating and popularizing new financial instruments as well as new financial technologies and marketing. It therefore allows enterprises to increase their competitiveness, improve their risk of managerial skills and satisfy their consumer and commercial needs (Tufano, 2003; Laeven & *al.*, 2015). Financial innovation can be in institutional, and product or process form. Financial process innovation refers to the introduction of new business processes linked to increased efficiency and business expansion. In Africa, there are financial innovations such as mobile banking services, access to basic payment services via mobile phones without the need for Internet, cooperation between formal and informal financial institutions, etc.

Thus, the analysis of the relationship between financial innovation (as a tool for financial inclusion) and MSMEs performance comes from several theoretical developments. We have the Schumpeter (1934) innovation theory which is used as a basis for analyzing the relationships between financial innovation and MSMEs performance from a Post-Schumpeterian perspective with regard to Çinla and Pelin (2018) work. Rogers (1962) innovation diffusion theory which traces the behavior of business adoption in terms of innovation diffusion. Finally, Davis'(1993) technological acceptance theory which analyzes the behavior of individuals with regard to the technological innovation use.

Mobile money therefore represents a reliable financial innovation for improving MSMEs performance. Indeed, mobile money is a service that allows consumers to access financial services through the mobile phone (Shrier & *al.*, 2016), by dialing unstructured supplementary service data codes (USSD). USSD is a communication process through a mobile communication technology which is used for sending messages between mobile phones and an application program on a mobile network, which does not require that users have access to internet. The availability of this technological innovation

in developing countries helps reduce the difficulties associated with opening bank accounts and/or accessing banking services (FINMARK, 2017). It allows users to store, send and receive money without the need for bank account transactions (BEAC, 2018). Mobile money also helps reduce the costs of administering wages (Blumenstock & *al.*, 2015); increased access to different types of financing such as trade credit (Beck & *al.*, 2015). The use of the financial service via mobile phone has therefore increased rapidly through the experience of M-Pesa in Kenya. Its use by enterprises has been encouraged by SMEs, mainly retailers, who use it as a means of paying customers (Higgins & *al.*, 2012). More recently, its penetration has increased in terms of relationships with retail customers for the digitization of the entire inter-company value chain. This penetration is observed by a higher intensity of use at the level of enterprises compared to individuals. In addition to Kenya, we note in other African countries such as Ghana and Tanzania, the development of credit systems by mobile network operators which allows microcredit to be granted to SMEs (Njabu, 2018). Meanwhil, in Cameroon, there is only the effort of the State in terms of opening banks for SMEs benefit in 2015 (MSMESEH, 2019). However, mobile network operators in Ghana have had the possibility since 2015 of obtaining licenses directly from the central bank (Amponsah, 2018). In terms of business performance in Cameroon, over the past five years, 80 percent of business deaths have been noted. The majority of these are MSMEs who face many obstacles, mainly access and the cost to finance. In addition, even the contribution of various sectors to economic growth improved by 2.3 points for the tertiary sector and by 0.9 point for the secondary and primary sectors, there has been a poor performance in terms of activities development in the secondary sector, which stood at 3.2 percent in 2016 compared to 9.6 percent in 2015 (Talom & Tengeh, 2019). However, this sector is a pledge of structural transformation and competitiveness of the countries which are both necessary for growth and populations' well-being.

In addition, the use of mobile money in Cameroon is much developed for payments, sending and receiving money, even the savings and loan facilities are not yet effective. There are four major platforms for mobile money services in Cameroon which are: MTN Mobile Money, Orange Mobile Money, Express Union Mobile Money and more recently Nexttel Possa. However, it is only MTN and Orange Cameroon operators that are the service providers and the dominant players in the Mobile Money market in Cameroon. These two operators have 5.4 million users registered (MTN, 2018). Orange with 2.8 million users registered, offers the following services: depositing money, sending and receiving money transfers, ease in terms of visa cards, payment of insurance and related products, transfer between bank accounts and mobile money, etc. (Orange, 2018). MTN with a registered number of 2.6 million users, offers similar services with the exception of the visa card facility, payment of insurance costs and related products as well as transfers between bank accounts and mobile money. Mobile money is used by MSMEs to pay employees, suppliers, bills (water, electricity, telephone, TV) and to receive payments from customers.

However, if the analysis of the relationship between financial inclusion and business performance has been the subject of much study (following the work of Wang, 2016; Fowowe, 2017; Ndiaye & *al.*, 2018; Salman & *al.*, 2015; Bassey & *al.*, 2017; Lakuma & *al.*, 2019) under different aspects of inclusion, there have been few studies on the analysis of the relationship between financial innovation and business performance, notably those of Kimani (2016) and Ubi and Mba (2019). In addition, we have the study of Islama and al. (2016) which deals with the mobile money effect analysis on business investment in Kenya, Uganda and Tanzania. To our knowledge, the only study on the mobile money effect analysis on SMEs financial performance in Cameroon, was carried out by Talom and Tengeh (2019). The authors obtained at the end of their study that services of payment and reception of money via mobile money contributed to SMEs turnover improvement. We also found a study on the analysis of relationships between financial inclusion, financial innovation and enterprises performance. This was carried out by Lee and al. (2019) who have captured financial inclusion along its dimensions, and financial innovation by the total value of off-balance sheet items as a percentage of total assets and enterprises' performance by increasing their sales. Thus, in view of the Cameroonian context presented above and the possibility that network operators of credit systems development have an order to grant microcredits to SMEs like in Ghana and Tanzania, the question arises: what are the effects of financial innovation (via mobile money) compared to financial inclusion on MSMEs performance in Cameroon?

Thus, the general objective of this study is to make a comparative analysis of effects of financial inclusion (via banking services) and financial innovation (via mobile money services) on MSMEs performance in Cameroon. Specifically, this study will be the subject of a comparative analysis of:

- ✓ the use of banking and mobile money services on the growth rate of MSMEs overall turnover;
- ✓ the use of banking and mobile money services on the growth rate of MSME sectorial turnover;
- ✓ the association of the mobile money use with micro finance and bank financing on the MSME percentage of exports.

For this to be done, we will proceed by presenting the literature review in section 2, the methodology of study in section 3 and the results and policy implications in section 4.

2. Literature Review

This literary synthesis is presented both theoretically and empirically on the analysis of relationships between innovation and/or financial inclusion and MSMEs performance. At the theoretical level, it has been the subject of the development of three theories which are: the Schumpeterian theory of innovation, the innovation diffusion theory and the technology acceptance theory. Empirically, it synthesizes studies between financial inclusion and enterprises performance; financial innovation and enterprises performance and ends with the analysis of relationships between financial inclusion, financial innovation and enterprises performance.

2.1 Theoretical Literature

Schumpeter's Theory of Innovation

This theory emphasizes that entrepreneurs, who are able to be independent inventors or R&D engineers in large enterprises, are sources of opportunity for making new profits through their innovation activities (Schumpeter, 1934). Indeed, the author insists on the detection of value-generating activities as a possibility for enlarging and transforming circular income flows. He believes that this search for opportunity must be based on the distinction between innovation, marketing and entrepreneurship.

However, with regard to the banking sector, he draws a clear distinction between entrepreneurs whose innovations create the conditions for profitable new enterprises and bankers who create credit to finance the development of new enterprises (Schumpeter, 1939). He underlines the fact that the special role of creation and granting of credit by bankers corresponds to a monetary complement of innovations. Thus, as independent agents do not have shareholders in the new enterprises they finance, bankers are capitalists whose role is to manage risks on behalf of entrepreneurs. Their effectiveness therefore depends on the ability to assess the potential for success in financing entrepreneurial activities. Thus, Schumpeter enumerates that they must take care to refuse credit to the enterprises which lack this potential and to grant only to those which have it.

Thus, it emerges from the Post-Schumpeterian analysis of the nature of financial innovation according to the work of Çinla and Pelin (2018) that if banks and other financial intermediaries do not exist in the case of circular flows, we will observe their appearance in terms of stable growth. They will have the passive role of equalizing flows of investment and savings in terms of guaranteeing the monetary flow. Indeed, to the extent that the real and financial sectors of an economy are highly interdependent, financial innovations are important components of the financial sector (Festre & Nasica, 2009). According to Leathers and Raines (2004), the main role of modern financial innovation is to strengthen the risk financing and speculative excess that occurs in the secondary wave of the business cycle of the new economy. Thus, the Schumpeterian approach to economic cycles supports institutionalist and postkeynesian assessments of the role of modern financial innovations in the new economy and calls for rational government intervention.

Finnerty (1988) therefore classifies financial innovation according to the function fulfilled by each type of financial instrument, while Duffy and Giddy (1981) chose to do so according to supply and demand factors as stimulating financial innovation. Following the usual categorization, we have product innovation that includes new financial instruments, contracts, techniques and markets. Process innovation refers to a new and improved production process and organizational innovation which corresponds to institutional changes. Thus, to improve MSMEs performance, banks can make use of product financial innovation in the formation of new financial processes, techniques or strategies, i.e. in the creation of another financial innovation. Process financial innovation is used to improve MSMEs performance in terms of the use of new financial products introduced or disseminated on the market such as mobile money (Hu, 2009). Thus, process financial innovation is useful to customers in the form of a new way of carrying out their financial transactions as well as to businesses in terms of technological innovation which can be used in the production process.

Innovation Diffusion Theory

The diffusion of innovation theory comes from the work of Rogers (1962) in the field of communication. It is developed by the author to explain how, over time, an idea or product grows and spreads through a specific population or social system. The result of this diffusion is that people, within the framework of a social system, adopt a new idea, a new behavior or product which changes their functioning. The key to adoption is the perception of the idea, the behavior and the product as new or innovative which makes its diffusion favorable.

The approach of the theory of innovation diffusion rests mainly on the way in which the adopters (innovators, early adapters, early majority, late majority and laggard (Nooteboom, 1994)) perceive an innovation in terms of advantage or disadvantage relative. Thus, enterprises that make heavy use of a particular technology are more prone to early adoption of the next generation of that technology. The innovation diffusion approach is used in this study to understand the dynamics at play regarding the adoption and use of mobile money by MSMEs. Given that the organizational decision to adopt mobile money is closely linked to the owner/manager's personal perceptions and attitudes with regard to this technology; its dissemination in MSMEs will therefore take place mainly through interpersonal or inter-enterprise networks.

Technological Acceptance Theory

This theory comes from the work of Davis (1993) and relates the behavioral intentions of individuals and their use of technology. It turns out that a person's actual behavior is determined by their behavioral intent with regard to use. This intention is in turn influenced by the user's attitude towards the technology as well as its perceived usefulness. In turn, attitude and perceived usefulness are both determined by ease of use. Thus, utility and usability affect user attitudes to any service. Technological acceptance theory is designed to originally explain the use of the computer through the two cognitions of perceived utility and intentional attitude. More recently, Hart (2010) proposed the integration of other information and technology approaches that integrate the social and idiosyncratic characteristics of decision-makers. However, it appears that these approaches are still subject to certain shortcomings.

However, this theory is criticized for ignoring personal influence and control factors over behavior, including the lack of consideration of factors such as external influences of environmental attributes, suppliers, customers and competitors. On the other hand, the theory of innovation diffusion does not take into account the resources or social support of an enterprises with regard to the adoption of a new technology.

2.2 Empirical Literature

On one hand, for the analysis of the relationship between financial inclusion and enterprises performance, we have the study by Wang (2016) which analyzes the case of SMEs from 119 developing countries. Its results show that SMEs perceive access to finance as the most important barrier to growth. Similarly, Fowowe (2017) rather analyzes the effect of access to finance on SMEs performance in African countries; and finds that SMEs perceive access to finance as the most important barrier to growth. Contrary to these results, Ndiaye (2018) in his study on the analysis of determinants of SMEs performance (captured by indicators of capacity use; annual employment growth, labor productivity, sales; and the percentage of enterprises that buy fixed assets), concludes that the success of SMEs depends on both external and internal factors including technological innovation. Salman and al. (2015) show for their part the examination of effects of financial inclusion (mobile banking, banking and banking penetration) on SMEs growth and development in Nigeria that, its three dimensions all have positive effects on SMEs growth and development. Bassey and al. (2017) focused on the case of MSMEs in Nigeria. Their results show that financial inclusion (through the distance to access points to financial services, the shortage of infrastructure quickly challenged and effective access to financial services by MSMEs) positively impacts the operations and growth of MSME in Nigeria. Finally, Lakuma and al. (2019) also analyze effects of the business environment through financing on MSMEs growth according to their size in Uganda. As a result, they find that MSMEs receive more funding than large enterprises. These effects are more accentuated and more lasting at the level of medium-sized enterprises. The author explains these results by the fact that MSMEs are more constrained by credit than large enterprises.

On other hand, the analysis of the relationship between financial innovation and enterprises performance has also been the subject of several studies. The work of Kimani (2016) on the analysis of SMEs in Nairobi case reveals a positive relationship between the adoption of financial innovation and financial performance (such as the market share of enterprises, the increase in savings of enterprises and reduction of operating costs) of SMEs. Specifically, product innovation was captured by the

creation of new deposit accounts, new credit arrangements, and financial products. Process innovation is the introduction of new enterprises processes. And institutional innovation relates to changes in the enterprises structure, the establishment of new types of financial intermediaries or changes in the supervisory framework. Ubi and Mba (2019) assess the role of financial innovation on small and medium-sized industries growth in Nigeria. As a result, financial innovation (in terms of ATMs, point-of-sale terminals, internet banking, mobile banking, and branchless banking) has made a positive contribution to improving SMEs performance. Islama and al. (2016) specifically analyzes the effect of mobile money on increasing enterprises investment in Kenya, Uganda and Tanzania. They find that the use of mobile money has a positive effect on the likelihood of enterprises buying assets. This effect is explained by reduced transaction costs, increased liquidity and increased creditworthiness associated with the use of financial services on mobile phones. In addition, Talom and Tengeh (2019) analyze the effect of mobile money on SMEs financial performance in the city of Douala in Cameroon. They conclude that mobile money payment and receiving services contributes 73 percent of the total change in SMEs turnover after they started using the technology. Finally, the analysis of relationships between financial inclusion, financial innovation and enterprises performance has been the subject of very few studies. Indeed, Beck and al. (2015) show in their study that despite the fact that Africa's banking systems are underdeveloped compared to their peers, substantial progress has been made in the past two decades both in terms of financial inclusion and innovation as well as in terms of cross-border banking operations. They find that foreign banks from emerging markets, including those in Africa, have helped improve access to finance, but the opposite is true for banks from Europe and the United States. Thus, it remains a challenge to bridge the gap between financial deepening and financial inclusion. Lee and al. (2019) analyzes the relationship between financial inclusion, financial innovation and growth in enterprises sales in developing countries using different samples. They find that financial inclusion helps enterprises increase sales during times of no crisis and in non-Asian regions. After using the interaction between financial inclusion (share of companies with bank loans, share of companies with overdraft facilities, and share of companies using bank loans) and financial innovation (total value of items off balance sheet as a percentage of total assets) they obtain a negative impact of financial innovation on the rate of increase in sales of enterprises engaged in financial inclusion.

With regard to this literature review, the contribution of this study is related to the analysis of the contribution of financial inclusion compared to financial innovation (which is measured by the use of mobile money compared to the studies listed above) on MSME performance. It should also be noted that MSMEs performance is analyzed in terms of exports level in addition to the growth rate of their turnover in a general and sectorial way in this study. Thus, according to the study goals presented above, hypotheses are formulated as follows:

H1: The use of mobile money services improves MSME overall turnover growth rate more than the use of banking services;

H2: The use of mobile money services improves MSME sectorial turnover growth rate compared to the use of banking services;

H3: The association of the mobile money use with micro finance improves the MSME percentage of exports more than its association with bank financing.

3. Methodology

3.1 Models, Econometric Specifications and Estimation Methods

Different methodological approaches are used to verify our hypotheses.

Indeed,

- ✓ for hypotheses H1 and H2 analyzing relationships between the use of banking and mobile money services, and MSMEs turnover growth rate in an overall and sectorial way, we have retained specifications which are inspired by the work of Lee and al. (2019). These are as follows:

$$TGR_{oi} = \beta_0 + \beta_1 FIC_i + \beta_2 FIN_i + \beta_3 X_i + \varepsilon_i \qquad (1)$$

$$TGR_{mi} = \beta_{m0} + \beta_4 FIC_i + \beta_5 FIN_i + \beta_6 X_i + \varepsilon_{mi} \qquad (2)$$

$$TGR_{ti} = \beta_{c0} + \beta_7 FIC_i + \beta_8 FIN_i + \beta_9 X_i + \varepsilon_{ti} \qquad (3)$$

$$TGR_{si} = \beta_{s0} + \beta_{10} FIC_i + \beta_{11} FIN_i + \beta_{12} X_i + \varepsilon_{si} \qquad (4)$$

According to these equations,

- TGR_{oi}, TGR_{mi}, TGR_{ti} and TGR_{si} corresponds respectively to overall, and manufacturing, retail and services Turnover Growth Rates (TGR) of MSMEs *i*. These are obtained from revenues calculation of annual sales between the fiscal years 2013 and 2015.
- FIC_i corresponds to MSMEs financial inclusion which is measured by whether or not they have a bank account (current or savings). This measurement is retained insofar as it promotes the completion of transactions like mobile money;
- FIN_i corresponds to MSMEs financial innovation which is measured by their use or not of mobile money services. The uses of mobile money are in terms of financial transactions for the payment of employees, suppliers, invoices and the receipt of money from customers;
- X_i is a vector which will be used to take into account all the explanatory control variables;
- β_0, β_{m0}, β_{c0} and β_{s0} represent the constant terms of the different equations;
- $\beta_1, \beta_2, \ldots, \beta_{12}$ correspond to the parameters of the model;
- ε_i , ε_{mi} , ε_{ci} and ε_{si} correspond to the different error terms.

Estimates will be made by ordinary least squares for the set of equations 1 for overall relationship analysis, and 2, 3 and 4 corresponding to the analysis of the manufacturing, retail and service sectors. Once the results have been obtained, the various validity tests (the tests of global significance of the model, the R^2 and Adjusted-R^2, …) are appreciate before proceeding to analyse.

- ✓ For the verification of hypothesis H3, we will adopt the specification below:

$$PE_i = \sigma_0 + \sigma_1 WCM\_MMU_i + \sigma_2 WCB\_MMU_i + \sigma_3 Y_i + \mu_i \qquad (5)$$

With,

PE_i : corresponding to the percentage of exports; WCM_MMU_i: percentage of funding by microfinance institutions for MSMEs daily activities associated with their use of mobile money; WCB_MMU_i: percentage of financing by banking institutions of MSMEs daily activities associated with their use of mobile money; Y_i : a vector of explanatory control variables; σ_0 : the constant term ; σ_1 , σ_2 and σ_3 : the model parameters and μ_i : the error term. These associations allow us to approximate the contribution of the complementary role to mobile money service that network operators can play in terms of microfinance institution compared to that of banking institutions for the MSME exports increasing.

However, since not all MSMEs are involved in export activities, Equation 5 is subject to selection bias. To correct this bias, we will use Heckman's (1979) two-step selection model as follows:

Step 1: Using the simple probit model, we estimate equation 6, i.e. the probability that MSMEs export. To this end, we define the following choice model (for export or not):

$$Z_i = \begin{cases} 1 & if\ y^{"} > 0 \\ 0 & if\ not \end{cases} \quad \text{with} \quad y" = X_i\beta + \mu_i \qquad (6)$$

And we will then estimate the probability that Z_i = 1 by the maximum likelihood.

$$Prob\ (Z_i = 1) = Prob\left(Y_i^{"} > 0\right) = Prob(-\mu_i < \beta X_i) = F(\beta X_i) \qquad (7)$$

Where $Y_i^{"}$ is an unobserved latent variable, X_i the vector of the explanatory variables, β the vector of parameters, μ_i the vector of error terms according to a normal law of mean 0 and variance σ^2 and F (.) the cumulative function of a normal probability distribution.

2nd step: using ordinary least squares, we estimate equation 8 according to conditions listed in equation 5 which will allow us to explain the level of exports.

$$PE_i = \sigma_0 + \sigma_1 MF_i + \sigma_2 BF_i + \sigma_3 Y_i + \delta\lambda_i + \mu_i \quad for\ Z_i = 1 \qquad (8)$$

With for variable change according to the equation 5 $\beta X_i = \sigma_0 + \sigma_1 MF_i + \sigma_2 FB_i + \sigma_3 Y_i$; δ parameter vector; μ_i vector of error terms and λ_i vector of inverted Mills ratios from the estimation of the corresponding equation 7. In addition to avoid the endogeneity bias between WCM_MMU_i and WCB_MMU_i because of the redundant information linked to the consideration of the MMU, we use parsimonious regression techniques in this part.

3.2 Data of Study

The study will use the 2016 database of Cameroon World Bank Enterprises Survey which takes into account a total of 361 enterprises including 344 MSMEs. Among these MSMEs, we have around 149 micro-enterprises and 152 small and medium-sized enterprises. In terms of the use of banking services, we have, on the one hand, 248 MSMEs which have bank accounts against 73 which do not. On the other hand, there are 94 MSMEs which use bank finance for daily activities against 320 which do so through micro finance. In terms of mobile money usage, we have 46 MSME users versus 294 non-users. Specifically, there are MSMEs at the industry sector level, 109 manufacturing enterprises, 113 retail enterprises and 122 service enterprises. Among the latter, those with accounts are: 77 manufacturing MSMEs, 81 retail MSMEs and 90 services MSMEs. In terms of mobile money usage, there are 15 manufacturing, 10 retail and 21 service enterprises. In addition, there are around 95 exporting enterprises, including 53 users of mobile money services. Thus, to overcome the problem of sample size that can affect our estimates, we resorted the bootstrap estimation method to assess the robustness of our results.

4. Results and Policies Implications

The small size of our sample and the large amount of missing data on the various variables taken into account hampered the quality of the results obtained following our estimates using different methodological approaches. Indeed, we have emerged from the estimates linked to hypotheses 1 and 2, results valid only for the overall and services (retail and other services) turnover growth rates. The detailed results concerning the turnover growth rates of the manufacturing, retail and services are not valid (see appendix). Concerning the estimates linked to hypothesis 3, we encountered the same difficulties as for the results of estimates linked to the equation of exports percentage which takes into account the inverse of the Mills ratio for the bias selection correction (see appendix). Thus, we considered the results of the selection (export) equation.

4.1. Comparative analysis between the use of mobile money and banking services on the MSME turnover growth rates

We conclude that the estimation results presented in Table1 below are globally significant, based on the Fisher's statistics probabilities. The R^2 statistics also indicate that these models have good explanatory power.

This table shows that financial innovation through the use of mobile money by enterprises contributes to the improvement of overall and services turnover unlike their financial inclusion captured by the holding of bank accounts (current and/or saving). However, the breakdown of services into retail and other services rather shows a positive effect of the holding of bank accounts on the turnover of retail enterprises (see appendix). Hypothesis 1 of our study is confirmed while hypothesis 2 is only partially confirmed. Thus, particular emphasis deserves to be given to the use of mobile money for improving overall and services turnover.

Furthermore, it appears from the positive effects of the enterprises' export activity both on the overall and services turnover, a contribution of the technical skills on their overall turnover and the positive effects of the introduction of new products or services and of transport obstacles on the services enterprises' turnover. Thus, the level of transport obstacles encountered by services enterprises does not hinder the improvement of their performance.

Table1: Effects of mobile money and banking services on turnover growth rates

Variables	Overall Turnover Growth Rate	Services Turnover Growth Rate
Bank_Account (Savings or Current)	0.105	0.116
	(0.605)	(0.420)
Mobile_Money_Use	2.186**	1.911***
	(0.991)	(0.649)
Manager_Years_Experience	-0.0262	-0.000884
	(0.0230)	(0.0164)
Export	1.360*	1.388**
	(0.672)	(0.584)
Own_Website	0.571	0.461
	(0.501)	(0.384)
Elctricity_Cost	-0.159	-0.463**
	(0.180)	(0.171)
New_Products/Services	0.573	0.584*
	(0.449)	(0.337)
Equipment_Expenditure	-0.186	-0.263**
	(0.154)	(0.122)
Transport _Obstacle	0.208	0.410**
	(0.227)	(0.176)
Financial_Obstacle	-0.127	0.0410
	(0.152)	(0.117)
Technical_Skills	0.792*	0.481
	(0.406)	(0.342)
Marketing_Skills	-0.455	0.421
	(0.365)	(0.287)
Labor_Cost	0.117	0.131
	(0.123)	(0.0911)
Constant	2.062	5.252**
	(2.454)	(1.944)
Observations	43	35
R-squared	0.530	0.814
Fisher Statistic	2.516	7.063
Fisher Probability	0.0190	0.0000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' estimates on Stata

4.2. Comparative analysis between the use of mobile money, and banking and microfinance services on the MSME export activity

We conclude that the estimation results presented in the table2 below are valid according to the Chi2 probabilities at 10% and the statistics of pseudo R^2.

With regard to the estimation coefficients and the marginal effects, we note a significant contribution of the association of the mobile money use and microfinance for daily transactions on the probability that MSMEs export or not. While the association of the mobile money use with the financing of daily activities by banks has a negative but not significant effect on the MSMEs probability of export. These results confirm hypothesis 3 of our study. The extension of the mobile money services operators' activities in terms of microfinance institution is therefore favorable to the probability of MSME exports.

Furthermore, ownership website, marketing skills, labor costs and the existence of a support system all increase the MSME likelihood of exports. However, legal status, finance obstacles, the judicial system and the MSME activities sector constitute a hindrance to their probability of export.

Thus, it is urgent that a particular emphasis be placed on the development of the mobile money service and the liberalization of the financial sector for the benefit of network operators so that they can also operate in terms of micro finance in

Cameroon like their peers in Ghana and from Kenya. These policy directions will both improve the MSMEs turnover and their propensity to export in Cameroon.

Table2: Effects of the association of mobile money with banking and microfinance services on the MSME probability of exports

Variables	Export Probability	Margins Effects	Export Probability	Margins Effects
Working_Capital_Bank and Mobile_Money_use (WCB_MMU)			-0.00902	-0.00228
			(0.0141)	(0.00353)
Working_Capital_Microfinance and Mobile_Money_use (WCM_MMU)	0.360*	0.0551**		
	(0.205)	(0.0220)		
Manager_Years_Experience	-0.259	-0.0397	-0.00944	-0.00238
	(0.190)	(0.0244)	(0.00948)	(0.00237)
Technical_Skills	-3.719	-0.570	-0.0241	-0.00607
	(3.006)	(0.398)	(0.206)	(0.0520)
Legal_Status	-1.993*	-0.305**	-0.0182	-0.00458
	(1.203)	(0.137)	(0.117)	(0.0296)
Own_Website	9.746*	1.493**	0.263	0.0663
	(5.698)	(0.633)	(0.259)	(0.0648)
Financial_Obstacle	-3.584*	-0.549**	-0.175**	-0.0443**
	(2.102)	(0.231)	(0.0813)	(0.0199)
Marketing_Skills	5.711	0.875*	0.775***	0.195***
	(3.861)	(0.472)	(0.223)	(0.0522)
Labor_Cost	0.774	0.119	0.186***	0.0469***
	(0.568)	(0.0722)	(0.0510)	(0.0118)
Support_Systems	2.704	0.414*	-0.0627	-0.0158
	(1.904)	(0.237)	(0.201)	(0.0506)
Court_System	-2.152	-0.330*	-0.0692	-0.0175
	(1.424)	(0.171)	(0.119)	(0.0299)
Enterprise_Sector	3.494	0.535**	-0.431***	-0.109***
	(2.129)	(0.236)	(0.137)	(0.0323)
Constant	-5.066		-2.820***	
	(5.449)		(1.020)	
Observations	29		206	
Chi2	18.24		48.46	
Probability	0.0761		1.18e-06	
Pseudo R^2	0.534		0.208	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' estimates on Stata

Conclusion

Financial innovation through the development of mobile money is a major factor for improving the performance of Micro, Small and Medium Enterprises (MSMEs) to achieve the development of countries in general and especially those in Africa in particular. Thus, this research aim to make a comparative analysis of financial inclusion and financial innovation effects on Micro, Small and Medium-sized Enterprises (MSMEs) performance in Cameroon. Firstly, it deal with the comparative analysis of banking and mobile money services use on overall and sectorial turnover growth rate by using the ordinary least squares regressions. Secondly, it is the subject of comparative effects analysis of micro finance and banks financing on MSME exports in the context of the use of mobile money services. This latter analysis is done by using Heckman's selection model. Our results show that the use of mobile money improves overall and services turnover unlike banking. Similarly, the association of mobile money with microfinance promotes the likelihood of MSME exports, unlike their association with bank finance. Thus, we recommend a liberalization of the financial sector for the benefit of network operators so that they can also operate in terms of microfinance in Cameroon like their peers from Ghana and Kenya.

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Appendix

Table3: Effects of mobile money and banking services on detailed turnover growth rates

Variables	Manufacture Turnover Growth Rate	Retail Turnover Growth Rate	Others Services Turnover Growth Rate
Bank_Account (Savings or Current)		1.411*	0.434
		(0.475)	(1.097)
Mobile_Money_Use			1.357
			(1.409)
Manager_Years_Experience	0.0123	-0.0626**	0.0128
	(0)	(0.0162)	(0.0323)
Export		1.422**	2.346
		(0.433)	(1.360)
Own_Website		-0.610	0.304
		(0.310)	(0.935)
Elctricity_Cost	0.339	-0.127	-0.619
	(0)	(0.0889)	(0.394)
New_Products/Services	-1.307	0.420**	1.233
	(0)	(0.117)	(0.897)
Equipment_Expenditure	0.291	-0.488**	-0.180
	(0)	(0.141)	(0.257)
Transport _Obstacle	-1.057	0.104	0.390
	(0)	(0.0816)	(0.434)
Financial_Obstacle	0.881	-0.0148	0.0787
	(0)	(0.0697)	(0.259)
Technical_Skills	0.893	0.464*	0.588
	(0)	(0.192)	(0.808)
Marketing_Skills		-0.376	0.393
		(0.215)	(0.686)
Labor_Cost		0.0128	0.178
		(0.0424)	(0.200)
Constant	-7.629	7.872**	3.873
	(0)	(1.828)	(3.905)
Observations	8	16	19
R-squared	1.000	0.954	0.899
Fisher Statistics	.	5.190	3.405

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source : Authors' estimates on Stata

Table4: Effects of the association of mobile money with banking and microfinance services on the MSME exports_percentage

Variables	Export_Percentage	
Working_Capital_Bank and Mobile_Money_use (WCB_MMU)		0.167
		(0)
Working_Capital_Microfinance and Mobile_Money_use (WCM_MMU)	0.0558	
	(0.654)	
Manager_Years_Experience	0.364	1.803
	(0.394)	(0)
Technical_Skills	10.21	-
	(8.456)	
Legal_Status	-2.359	-34.24
	(4.125)	(0)
Own_Website	-21.42*	-1.610
	(12.10)	(0)
Financial_Obstacle	11.12*	-
	(5.917)	
Marketing_Skills	-46.66**	59.31
	(22.37)	(0)
Labor_Cost	-12.30**	-10.61
	(5.947)	(0)
Support_Systems	-8.774	-
	(7.928)	
Court_System	6.736	6.320
	(5.495)	(0)
Enterprise_Sector	26.20*	-
	(13.97)	
imr1	-367.2*	-
	(182.9)	
Constant	423.2**	186.6
	(183.7)	(0)
Observations	52	8
R-squared	0.179	1.000
Fisher Statistics	0.710	.

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source : Authors' estimates on Stata