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**IMPACT OF INTELLECTUAL CAPITAL ON THE
FINANCIAL PERFORMANCE OF MICROFINANCE IN
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ABSTRACT

Successful financial institutions are those that continually innovate, while relying on new technologies, emphasizing on skills, and knowledge of their employees rather than assets. Knowledge being the key to new engine of microfinance institutions has become one of the most important aspects in recent years and the value it generates are intangible and are not always in the financial statement of these institutions. Forward-looking financial institutions have realized that Intellectual Capital (IC) is an integral part of understanding the financial performance of microfinance institutions. This study therefore tries to investigate the impact of intellectual capital and the financial performance (profitability and productivity) in the microfinance in Yaoundé, Cameroon. The results were based on data collected by the governments statistic office from 64 microfinance for the year 2007-2008 and it was found that microfinance do not totally rely on intellectual capital but investors baseless of their interest on the assets of the companies. Correlation and regression models were used to examine the relationship between intellectual capital and financial performance that is profitability and productivity. The findings from this study show that microfinance still depend very much on physical capital intensity and individually, each component of the VAIC commands different values as compared to the aggregate measure, which implies that investors place different value on the three VAIC components. The results indicate that physical capital intensity and human capital efficiency as well as capital employed efficiency are the most significant variables which are related to productivity. This study concludes that VAIC can explain productivity as well as profitability.

Keywords: Intellectual Capital; Profitability; Productivity; Value Added Intellectual Coefficient

INTRODUCTION

Nowadays firms are facing strong competition than of the past (Adongo and Christopher; 2005). Companies do not primarily invest in fixed assets, but in intangible assets that plays an important role in determining the value of a firm. The progress of economic growth refers to knowledge – based economic and the implementation of knowledge management. This system shares opinion that conventional capitals such as natural resources, financial resources are meaningless without knowledge-base and technological base capital. The implementation of knowledge-base and technological-based capital in a firm will accelerate the efficiency and effectiveness of the implementation of other resources, so that they will affect the competitive advantage of the company.

Though the growth of microfinance truly began to escalate in the early 1990s, it has existed in Cameroon for almost fifty years. The first appearance of microfinance institutions occurred in 1963 in the Northwest Province where Anthony Jasen, a priest from Holland, created the first savings and credit cooperatives in the country. The relative success experienced by these institutions lead in 1968 to the creation of the Cameroon Cooperatives Credit Union League (better known as CAMCCUL), which is currently the longest standing microfinance network in Cameroon.

Toward the end of 1970s, Cameroon first began to experience an economic downturn, during which certain banks in the country began to suffer financially from a lack of available liquid funds. During the early 1980s, banks in Cameroon became increasingly unable to support themselves as it became more difficult to receive international credit and they were largely unable to obtain their own resources within the country. In the late 1980s, this resulted in government action; namely, there was a complete restructuring of all financial institutions, causing many banks to close their doors while taking the savings of many Cameroonian citizens with them.

1.2 Statement of the research problem

Intellectual capital is the key source of wealth creation which is consider as the crucial aspect of the high rate of competitiveness of the microfinance in the world, Africa at large and Cameroon in particular. The high competition that one company may have over other is due to the fact that knowledge is invisible and intangible as the Resource Based View of Penrose (1959) state which is the most important factor that contributes to the growth and development of firms in all growing developing economy. Using the concept of Skandia Navigator (see Bontiset *al*, 1999), Pulic (2000a, 2000b), depicted firms market value as created by capital employed and intellectual capital which consists of human capital and structural capital. Pulic proposed the Value-Added Intellectual Coefficient method to provide information about the value creation efficiency of tangible and intangible assets within a company.

Instead of valuing the intellectual capital of a firm, the VAIC method was used to measure the efficiency of firms with the following output; capital employed, human capital and structural capital, namely the capital employed efficiency (CEE), the Human Capital Efficiency (HCE), and the Structural Capital Efficiency (SCE) respectively which when sum up together gives the VAIC. A high VAIC suggests better management utilisation of company's value creation potential. In this context, this study intends to explore the relationship between intellectual capital efficiency (Value Added Intellectual Coefficient (VAIC)) and performance of microfinance in Yaoundé, Cameroon.

Although intellectual capital has been recognised as a firm's wealth driver, there are many issues that are still being debated. In this regard, a key question arises: **“What is the impact of intellectual capital on the financial performance of microfinance in Yaoundé?”** Obviously, investors and the financial markets attach value to the skills and expertise of Chief Executive Officers (CEOs) and other top management officers (Bontis, 2001). Recent contributions have suggested that knowledge and information are actually subject to increasing returns, as opposed to the decreasing returns typical of traditional resources (Bontis *et al*, 1999). If

this is true, then knowledge and information should become even more attractive to companies than before. Having a good base of knowledge means that a company can in future start leveraging that base to create even more knowledge, thus increasing its advantage on competitors.

The specific research questions are:

- What is the role played by human capital efficiency (HCE) on financial performance of microfinance?
- What is the influence of structural capital efficiency (SCE) on the financial performance of microfinance?
- What is the effect of capital employed efficiency (CEE) on the financial performance of microfinance?

1.3.1 Main Objective

The principal objective of this study is to investigate the impact of intellectual capital on the financial performance of microfinance in Yaoundé, Cameroon.

1.3.2 Specific Objectives

- ✓ To evaluate the role played by human capital efficiency on the financial performance of microfinance in Yaoundé.
- ✓ To investigate the influence of structural capital efficiency on the financial performance of microfinance in Yaoundé.
- ✓ To assess the effect of capital employed efficiency on the financial performance of microfinance in Yaoundé.

1.4 Research Hypothesis

These objectives suggest the following hypotheses: -

H1- Human capital efficiency is positively related to the financial performance of microfinance.

H2- Structural capital efficiency is positively correlated with the financial performance of microfinance.

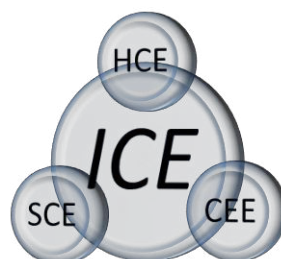
H3- Capital employed efficiency is positively associated with the financial performance of microfinance.

1.5 Significance of the Study

The significance of our research is to show the impact of intellectual capital on the financial performance of microfinance in Yaoundé, Cameroon. It is obvious that in most companies today, knowledge is the base of performance, development and growth. This knowledge-base is particularly more important for microfinance that considers the intellect of personnel and how they use this knowledge to increase their performance. We should be able to identify the various components of intellectual capital and also show how each has contributed to the financial performance of these companies. We should also be able to measure each component and know how it has added value to these companies.

2.1 Conceptual considerations of intellectual capital

Conceptually IC has the following component as shown below See figure 1 below



Source: personal initiative

Where HCE is Human Capital Efficiency, SCE is Structural Capital Efficiency; CEE is Capital Employed Efficiency and ICE is Intellectual Capital Efficiency which is the ability to create potential values and future earnings capabilities of intangible assets.

2.2 Legal Framework of microfinance institutions in Cameroon

In the 1980's there was the outbreak of bank crisis and because of this crisis microfinance were developed in Cameroon although many people were still in the need of the banking services in Cameroon, that were no longer readily available. Microfinance proved to be able to provide these services and the number of institutions in Cameroon began to increase. In the interest of more efficient regulation of the financial sector on the part of the Cameroonian government, a series of new laws were created. The first of these was law n° 90/053 of 19 December 1990 granting freedom of association. Two more laws were passed in 1992 and 1993 outlining specific responsibilities and regulations for Common Initiative Groups (CIGs) and Economic Initiative Groups (EIGs) which are none in French Language as "groupesd'initiatives communes" (GIC) and "groupesd'initiatives économiques" (GIE) respectively.

In 1998 law n° 98/99 was passed and began to recognize microfinance institutions as unique entities in the financial sector. Under this law, microfinance institutions were placed under the control of the Ministry of Finance rather than the Ministry of Agriculture, by whom they had previously been overseen. Furthermore, the Commission of Central African Banks in French "La Commission Bancaire de L'Afrique Centrale" (COBAC) was officially recognized as an authority figure of microfinance institutions that was capable of dissolving them if they did not adhere to its regulations. Finally, in 2002, the law n° 01/02/CEMAC/UMAC/COBAC, which clearly defines and controls the activities of microfinance institutions in Central Africa, came into effect.

2.3 Structure of Microfinance in Cameroon

Under article 5 of the regulations, a microfinance institution may be considered either a category one, category two, or category three microfinance institutions. Those which fall under the first category are cooperative institutions, which provide savings opportunities exclusively to members and then use these savings to offer credit for member-run projects. These organizations cannot seek profit and exist for the sole purpose of the empowerment of their members. Category two microfinance institutions are profit-seeking institutions which offer savings and credit services to the public. Finally, category three microfinance institutions are profit-seeking institutions which provide credit services to the public but do not offer any savings services.

As was mentioned in the above, there are currently over 500 microfinance institutions in Cameroon. These institutions account for approximately eighty percent of all microfinance institutions in Central Africa, which does contain relatively few institutions compared to other regions of Africa. Cameroon is also among the top ten African countries for both savings (3.0%) and loan (0.8%) penetration rate, indicating that a relatively large percentage of the Cameroonian population uses the services of microfinance institutions.

In relation to other countries in Africa, Cameroonian microfinance institutions operate relatively efficiently. Cameroon is one of thirty-one African countries to have passed new microfinance-specific legislation since 2002 and is one of the relatively few to have specific laws governing microfinance institutions separately from banks. Additionally, unlike some African countries, Cameroon does not impose maximum interest rate caps. Such restrictions are considered by many to be counterproductive, as they are often set at a restrictively low rate that hinders the sustainability of microfinance institutions.

There are, however, certain factors that deter the success of microfinance in Cameroon to some extent. For one, there is a distinct lack of infrastructure, especially in rural regions, and a population density that is less than ideal in much of Cameroon. These conditions differ from those in countries of the western and eastern

world where extremely high population density allows services to be distributed to millions of people in some cases rather than to thousands, as is true in Cameroon. Because of this constraint, the cost to operate microfinance institutions in can be quite high in Cameroon and can hinder their ability to be financially sustainable.

Furthermore, effective strategies to manage loan delinquency are not always available. A technique such as group lending could theoretically be employed in certain rural communities, where agricultural or other groups are more common and the incentive to receive a loan as a group exists. However, in large cities like Yaoundé, it is difficult to employ such techniques due to the lack of organized groups such as these and the diversity of the populations that live there.

In lieu of these techniques, institutions in Yaoundé attempt to employ others that are more appropriate in an urban setting. For example, certain institutions require “co-makers” for the credit applications of clients who lack a satisfactory amount of collateral. In the case that the person who takes the loan is unable to repay, the responsibility then falls on the co-maker to do so. Furthermore, it is usually insisted upon that this person is a civil servant, as that allows the institution to demand unendorsed paychecks for the purpose of using them to repay the loan should it become necessary to do so.

2.4 The literature review of intellectual capital efficiency

Recently, research base on the theory of intellectual capital efficiency has shown an important aspect as far as the financial performance of microfinance institutions are concern. In effect, intellectual capital efficiency has help in contributing to the financial performance of microfinance institutions so as to meet up with the high status of developed economies that is probably why authorities in Cameroon are taking the challenge to become an emerging economy by 2035. Since these microfinance institutions has and is helping in reducing the unemployment rate in Cameroon at large and Yaoundé in particular, it has also help Cameroonians in saving income and payment of salaries as well as keep important documents like will, land title and many other documents. Intellectual capital also helps micro financial institutions in future to overcome the problems competition with other microfinance institutions in the economy. Moreover, there are some important theories which cannot be left out when intellectual capital is discussed since they embody the intangibles resources of companies.

There is no doubt that intellectual capital has some foundation on which it principles are base. Looking critically on intellectual capital with a trough understanding of the literature review we are able to say that other resources influence the promotion of intellectual capital. The development of intellectual capital theory has been guided by the ideas and thoughts of a handful of influential practitioners, including Sveiby (1997), Kaplan and Norton, 1992 and Edvinson and Malone, 1997. These pioneers established the basis of the “intellectual capital standard theory” in which the talk of the theories of intellectual capital such as the Resource Base View of Penrose (1959) and Wernelfelt (1984), Strategic Intend Competent of Prahalad and Hamel (1989-1990) and the Competent Base View and Knowledge Base View of Prahalad and Wernelfelt (1984).

3.1 Theoretical framework of ICE

According to resource-based theory, a company is perceived to achieve a sustainable comparable advantage by controlling both its tangible and intangible assets (Belkaoui, 2003). Firer and Stainbank (2003) advocate that value added is a “more appropriate means for conceptualizing a company’s performance.”

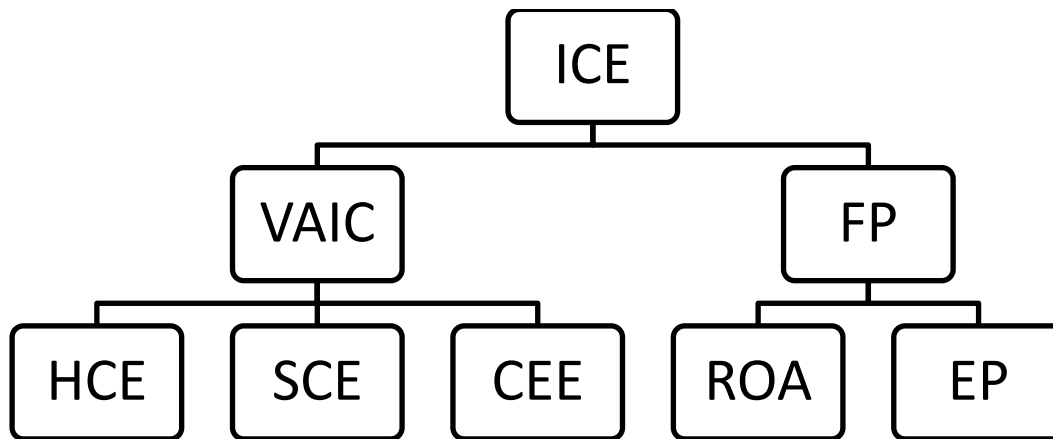


Figure 2: Theoretical Framework

Source: personal initiative

The framework for this study as in the Figure shows that value added intellectual coefficient influences corporate performance of companies. The information asymmetry on financial statements and the increasing gap between organizations' market and book value have drawn much attention to the credibility of the current reporting system. This widening gap between the market value and the book value of organizations has raised questions on the adequacy of the current reporting system. The difference between the market value and the book value of a company is said to represent its intellectual capital (Edvinsson and Malone, 1997). The value of value added intellectual coefficient comprises the Capital Employed Efficiency, the Human Capital Efficiency and the Structural Capital Efficiency.

It is believed that investors will place a higher value for firms with greater intellectual capital (Belkaoui, 2003; Firer and Williams, 2003). As such, it is expected that intellectual capital plays an important role in enhancing financial performance and corporate value of microfinance institutions in Africa and in Cameroon in particular. Microfinance institutions which show good financial performance are believed to have greater intellectual capital and if investors place different values for the three components of value-added intellectual coefficient. It also envisaged that any company with more efficiency in productivity is said to have a better intellectual capital in these firms.

Modern society can be described as a society based on a deep and broad penetration of scientific and technological knowledge in all spheres of social life and its institutions. By the mid-twentieth century, the society and the economy were primarily understood in the context of physical resources and physical labor. However, in modern society one perceives the tendency of decreasing the importance of physical resources and physical labor as the basic factors of production and sources of value creation. However, what is new is that property and labor, more than ever before, embedded in them the intangible component - knowledge.

Therefore, the knowledge society phenomenon indicates a significant structural economic change and a transition from the industrial economy to economy intensively based on knowledge. Since an OECD classification of high technology industries, medium tech and low-tech industries rests only on one indicator, namely intra natural Research and Development, which is open to two important objections. Firstly, it is by no means the only measure of knowledge-creating activities and secondly, it ignores the fact that this knowledge is relevant to an industry but it can be distributed across many sectors or agents: such as the low-research and development industry may also be a user of knowledge generation elsewhere.

Modern innovation theory sees knowledge-creation in a much more diffuse way. Firstly, innovation rests not on discovery but on learning. Learning need not necessarily imply discovery of new technical or scientific principles, and can equally be based on activities which recombine or adapt existing forms of knowledge; this in turn implies that activities such as design and trial production (which is a form of engineering experimentation) can be knowledge-generating activities (Lundvall, 2003). A second key emphasis in modern innovation analysis is on the external environment of the firm. Firms interact with other institutions in a range of ways; these include purchase of intermediate or capital goods embodying knowledge. The installation and operation of such new equipment is also knowledge-creating and also the purchase of licenses used to protect knowledge.

Finally, firms seek to explore their markets given that innovations are economic implementations of new ideas, then the exploration and understandings of markets, and the use of market information to shape the creation of new products, are central to innovation. These points imply a more complex view of innovation in which ideas concerning the properties of markets are a framework for the recombination and the creation of knowledge via a range of activities. This framework research and development is important, but tends to be seen as a problem-solving activity in the context of innovation processes, rather than an initiating act of discovery (Borras, 1997). Relevant knowledge base for many industries is not internal to the industry, but is distributed across a range of technologies, actors and industries¹. These inter-agent or inter-industry flows conventionally take two basic forms, 'embodied' and 'disembodied'. Embodied flows involve knowledge incorporated in to machinery and equipment. Disembodied flows involve the use of knowledge, transmitted through business cooperation's, scientific and technical literature, consultancy, education systems, and movement of personnel activities. The basis of embodied flows is the fact that most research-intensive industries (such as the advanced materials sector or the information and communication technology complex) develop products that are used within other industries. Such products enter as capital or intermediate inputs into the production processes of other firms and industries: that is, as machines and equipment, or as components and materials. When this happens, the improvements of performance are generated in one firm or industry which therefore shows up as productivity or quality improvements in another. Competitiveness within 'receiving' industries depends heavily on the ability to access and use such technologies.

Clearly, many different kinds of skills, scientific disciplines and knowledge areas are involved in the functions and activities in industry of financial sectors. The core knowledge areas are microfinance institutions in Yaoundé, Cameroon. Despite the perception that is in this sector with relatively low levels of internal research and development, it might well be known that it is one of the most knowledge-intensive sectors of the entire economy since it grants loans which in the long-term help in investment which encourages employment and then growth and development.

3.2 Methodology

Intellectual capital and the financial performance of microfinance institutions have been considered to have three component of intellectual capital, which are human capital efficiency, structural capital efficiency and capital employed efficiency and are calculated with the help of value added intellectual coefficient and on the other hand Financial performance has two components which are return on asset and employees productivity as discuss by Ahangar (2010)² which is consider as the profitability and productivity of Microfinance Institutions. He also adopted Pulic's (1998, 1999) method in calculating intellectual capital efficiency that is the use of the VAICTM of which there exist three important components which are human capital efficiency, structural capital efficiency and capital employed efficiency which has also been of great important to all other researchers who

¹ A distributed knowledge base is a systemically coherent set of knowledge, maintained across an economically and /or socially integrated set of agents and institutions.

² The relationship between intellectual capital and financial performance: An empirical investigation in an Iranian company

have investigated in the domain of intellectual capital efficiency. We also used the same financial performance component as Ahangar (2010) such as Return on Assets (ROA) use for profitability and Employees Productivity (EP) for productivity.

3.2.1 The method of analysis

The empirical analyses of this research make use of the correlations between the dependent and the independent variables obtained by the Pearson product moment correlation analysis. Statistical values such as the Standardised coefficients (β) and the Coefficient of determinations (R-square) are used in the following discussion to illustrate the predictive and explanatory power of the models. Here multiple regression models are used because there are many independent variables. The proposed regression models are shown in table 1.

Table 1: REGRESSION MODEL

MODEL	REGRESSION EQUATIONS ³
	$ROA_I = B_0 + B_{11}VAIC^{TM} + B_{12}PCI + B_{13}ATO + B_{14}LVE + \mu_1$ I^A
	$EP_I = B_0 + B_{11}VAIC^{TM} + B_{12}PCI + B_{13}ATO + B_{14}LVE + \mu_1$ I^B
	$ROA_I = B_0 + HCE_{11} + SCE_{12} + CEE_{13} + ATO_{14} + LVE_{15} + PCI_{16} + \mu_2$ 2^A
	$EP_I = B_0 + HCE_{11} + SCE_{12} + CEE_{13} + ATO_{14} + LVE_{15} + PCI_{16} + \mu_2$ 2^B

Where, ROA= Return on Assets, EP is Employees performance, Value Added Intellectual Coefficient (VAICTM), Physical Capital Intensity (PCI), Asset Turnover (ATO) and Leverages (LVE). The two regression in the Table were used to enable us analyse our variables. Looking at the first two equations we notice that they were used to analyse the relationship that exist between the independent variable (VAICTM) which is the combination of human capital, structural capital and capital employed and the two dependent variables (ROA and EP).

3.2.1.1 Independent variables⁴

The Value-Added Intellectual CoefficientTM (VAICTM) methodology developed by Pulic (1998) forms the underlying measurement basis for the independent variable in this present study. In his words VAICTM is an analytical procedure designed to enable management, shareholders and other relevant stakeholders to effectively monitor and evaluate the efficiency of VA by a firm's total resources and each major resource component. VAICTM is a composite sum of two indicators these are: (1) Capital Employed Efficiency (CEE) – indicator of VA efficiency of capital employed; (2) Intellectual Capital Efficiency (ICE) – indicator of VA efficiency of company's Intellectual Capital base. Intellectual Capital Efficiency is composed of (a) Human Capital Efficiency (HCE) – indicator of VA efficiency of human capital; and (b) Structural Capital Efficiency (SCE) – indicator of VA efficiency of structural capital.

Value Added (VA): are newly created value, calculated as follows

VA = Operating Profit + Employee costs + depreciation + Amortization or

VA = OUTPUT (Total Income) – INPUT (All costs of purchasing goods and services from the market)

Human Capital (HC): are overall employee expenses (salaries, education, and training); in this analysis considered an investment, not cost, and thus not substantial part of INPUT any more. There: HUMAN CAPITAL EFFICIENCY (HCE = VA / HC)

³ As discuss by Samuel Kai Wah Chu, Chan K.H, Ka Yin Yu, Hing Tai Ng, and Wai Kwan Wong. An Empirical Study of the Impact of Intellectual Capital on Business Performance (2010)

⁴ Intellectual Capital Efficiency and Firm's Performance: Study on Malaysian Financial Sectors by NikMaheranNik Muhammad *et al* (2009); Testing the relationship between intellectual capital and firms' market value and financial performance: evidence from Bangladeshi industries by Tashfeen Hussain *et al* (2010); and others.

Structural Capital (SC): are results of Human Capital's past performance (organisation, licenses, patents, image, standards, and relationship with customers).

Therefore: STRUCTURAL CAPITAL EFFICIENCY ($SCE = SC / VA$)

Capital Employed (CE): are all material and financial assets.

CAPITAL EMPLOYED EFFICIENCY ($CEE = VA / CE$)

Intellectual Capital Efficiency (ICE = HCE + SCE): are indicators which show how efficiently IC has created value. They are also indicators which show how much VA is created on each monetary unit invested in CE.

Value Added Intellectual Coefficient (VAICTM = ICE + CEE): The two sub-components of VAICTM form the independent variables in our research. They indicate the value creation efficiency of all resources (sum of the previous indicators). It expresses the intellectual ability of a company or firm.

3.2.1.2 Dependent variables

In this study we are going to base our interest on the profitability (ROA) and the productivity (EP) of the microfinance institutions in Yaoundé, Cameroon.

Profitability (ROA): - Profitability shows the degree to which a firm's revenues exceed over cost. It is the ratio of the net income (less preference dividends) divided by book value of total assets as reported in the annual reports; (Williams and Firer, 2003; Chen *et al*,2005; Ahangar, 2010).

ROA will help us to reflect on the firm's efficiency in using her total assets while holding the financial policy of the firm constant.

Return on Assets (ROA) = (Net Income –Preference Dividends) or Profit before tax / Total Assets or Average Total Assets

Employee productivity (EP): Employee productivity is a measure for the net sales per employee, which reflects employees' productive capability (Chen, Cheng and Hwang, 2005; S Najibullah, 2005; Raze G. Ahangar, 2010). It is calculated as follows: EP = net sales for the period/ number of employees. Employees Productivity is a very important indicator in the calculation of the financial performance because it measures the net value added per employee in a firm thereby reflecting the employee's productivity and can also be calculated by Employee Productivity = Profit before Tax / Number of Employees.

3.2.1.3 Control variables

For the purpose of this empirical analysis our study uses the correlation and the multiple regressions as the underlying statistical tests. In conducting the multiple regressions analyses following control variables are generally included:

Leverage (Lev): -Financial leverage and debt structure as measured by total debt divided by book value of total assets is used to control for the impact of debt servicing on corporate performance and wealth creation (Riahi and Belkaoui, 2003).

Physical capital intensity (PC): Physical capital intensity is measured by a ratio of a company's fixed assets to its total assets (Firer and Stainbank, 2003; Firer and Williams, 2003) is used to control for the impact of fixed assets on corporate performance. The assumption is that company's fixed assets have significant impact on company's financial performance.

Assets turnover ratio (ATO): It is the ratio of total turnover to total assets. This ratio is used to control for the impact of total assets on corporate performance.

Figure 3: THE SUMMARY OF THE VARIABLE USED

Variable type	Variable name	Variable definition
Dependent variable	Return on Assets (profitability) Employees Productivity (productivity)	<ul style="list-style-type: none"> ○ ROA = Profit before tax / Total Assets or Average Total Assets ○ EP = Profit before Tax / Number of Employees
Independent variable	Value Added Intellectual Coefficient (VAIC) Human Capital Efficiency (HCE) Structural Capital Efficiency (SCE) Capital Employed Efficiency (CEE)	<ul style="list-style-type: none"> ▪ VAIC = HCE + SCE + CEE ▪ HCE = VA / HC ▪ SCE = SC / VA ▪ CEE = VA / CE
Control variable	Physical Capital Intensity (PCI) Asset Turnover (ATO) Leverages (LVE)	<ul style="list-style-type: none"> ● PCI = fixed assets /total assets ● ATO = Turnover /total assets ● LVE = Total debt / total assets

Source: Personal initiative

3.2.1.4 The source of data collection

The data used in this our research were collected from the National Institute of Statistic in Yaoundé which concern Microfinance of the City of Yaoundé, Cameroon. Some of the rough information was collected from microfinance institutions and it was notice that these microfinance Institutions have contributed greatly to the growth and development of the country in general and the development of human skills in particular through the encouragement of education which has reduces the rate of unemployment in the Country. These microfinance Institutions were selected on the basics of the availability of information necessary for conducting the study for the periods 2007 - 2008. Since we have based our study only on a period of two years, we will say that the sampling is easy and convenience for analyses but the data collected from the NIS is not clear enough so we have analysed the variables clearly for a quick understanding. For this reason, we have to use “immobilisation financière” as the office equipments and “autres immobilisation financière” as other office equipments such as intangibles for which their sum will give us the structural capital. Apart from the structural capital, capital employed is obtained with the help of the physical assets +financial assets or still total assets – intangible assets at the end of period t. From our data, the “total actifimmobilisé” and “actifimmobilisé” when sum together is considered as the total assets while intangible assets are the “autres immobilisation financiers”. For the capital employed we used “Total actifimmobilisé” and for the human capital we used the simple application which was as such structural capital (SC) = value added (VA) – human capital (HC) so to continue we had to make human capital the subject of the formula which permitted us to get our human capital as shown below: $SC = VA - HC$, $SC + HC = VA$, $HC = VA - SC$. From the above it is clear that our human capital can be obtained by deducting structural capital from the value added as given in the data from NIS. To deduce the dependent variables from our data we used “resultatd’exploitation” as our profit before tax and for total assets we sum “total actif immobilisé” and “actif immobilisé” which permitted us to calculate our Return on Assets (ROA) that is the profitability. Moreover, the employee productivity is also a

very important factor as far as the financial performance is concerned because it helps us measure the net value added per employee in the development or growth of a firm. So we equally used the number of employees in each firm and also the profit before tax that is *résultatd'exploitation* and the “effectif” as the number of workers which enable us to calculate the productivity.

3.2.1.5 The Samples used

Of the thousands of Microfinances existing in Cameroon in general and Yaoundé in particular, only sixty-four (64) Microfinance were used for this research within the period of 2007 – 2008. Some of the preliminary information concerning these Microfinance were equally collected from some relevant articles and from some documents gotten from the Ministry of Finance in Yaoundé.

3.2.1.6 Software Used

As far as our research is concern, we were able to conduct our regression analyses with the help of the STATA 11 which is a statistical package for managing, analyzing, and graphing data.

4.1 Statistical analyses of data

The research sample is drawn from some micro finance in Yaoundé for the years 2007 and 2008. A sample of sixty-four (64) micro finance were maintained after eliminating microfinance with insufficient data for analysis and the data remaining were now used to carry out the descriptive statistic, pair-wise correlation and the regression analyses.

4.1.1 Analyzing the Descriptive Statistics

This table presents the descriptive statistic for the dependent and independent variables. The mean for Return on Assets (ROA) is 0.0259 which implies that the utilization of total assets is very low in increasing profitability of micro finance in Yaoundé. On the other hand, the mean for Employees Productivity (EP) is 2299159 which imply a high role played by employees in increasing productivity of micro finance. The mean of the Value-Added Intellectual Coefficient (VAIC) is 75.07439 which implies that the help of this variables which are Human Capital Efficiency, Structural Capital Efficiency, and Capital Employed Efficiency when combined together. However, if the components are examined individually, it is evident that Human capital efficiency with mean 69.999 which is more efficiency when compare to the Structural capital efficiency with mean is 4.404 while the mean for Capital employed efficiency is 0.669 which also has a positive effect on micro finance in Yaoundé.

Table 2: DESCRIPTIVE STATISTIC

	OBS	MEAN	STD. DEV	MIN	MAX
EP	64	2299159	1.54	-2.47	7.66
ROA	64	.0259752	.3251271	-1.002132	1.072752
HCE	64	69.99972	253.7269	-9.639432	1571.284
SCE	64	4.404715	61.07847	-169.4217	416.0559
CEE	64	.6699512	1.865196	-.2475377	14.79827
VAIC	64	75.07439	260.0118	-169.4105	1572.862
ATO	64	1.028433	2.706852	.0107365	21.65296
LVE	64	-.080018	.3511375	-1.259486	.6597436
PCI	64	.3709004	.1039027	.0070088	.5

Diagnosing the correlation analyses

The output given in the table below depicts that there is a significant positive relationship between return on assets, employee’s productivity, capital employed efficiency, assets turnover, and leverages at the significant

level of 0.05 this mean that Return on assets is positively associated with Employees productivity, Capital Employed efficiency, Assets turnover and leverages. As such when the productivity increases it is said to increase the capital employed efficiency. The statistical diagnostic also confers that there is no collinearity among the explanatory variables among the dependent variables as well. This is evident by the results below which shows a high pair-wise correlation between the explanatory variables that is HCE, SCE, and CEE have a negative significant level while SCE and HCE also have a negative pair-wise relation level of significant. But it is obvious that the CEE has a great role to play in the performance of micro finance in Yaoundé.

Table 3: CORRELATION ANALYSES

	ROA	EP	HCE	SCE	CEE	VAIC	ATO	LVE	PCI
ROA	1								
EP	0.6413*	1							
HCE	0.0303	-0.0255	1						
SCE	-0.0041	-0.0172	-0.0157	1					
CEE	0.5376*	0.1022	-0.0146	-0.0226	1				
VAIC	0.0324	-0.0282	0.9720*	0.2194	-0.0124	1			
ATO	0.5150*	0.0697	-0.0164	-0.0174	0.9937*	-0.0129	1		
LVE	0.6536*	0.4045*	0.0683	0.0197	0.3124*	0.0735	0.2951*	1	
PCI	-0.1403	-0.1951	-0.5649*	0.0797	0.0702	-0.5321*	0.0734	0.0156	1

Linear multiple regression results

We are going to analyze the models the below of which model 1 examine the relationship between the dependent variables and VAIC which is the combination of HCE, SCE, and CEE while model 2 deals with the relationship between the dependent variables and the individual independent variables such as HCE, SCE, and CEE.

Linear regression for model 1

Model 1 examines the relationship between the ratios of financial performance that is ROA and EP and the aggregate measures of intellectual capital VAIC. Here we notice that the variable englobing HCE, SCE, and CEE is only significant to productivity (EP) of micro finance in Yaoundé at the significant level of 10% but realized that two of the control variables that is leverages is positively significant to productivity at 1% level which is 0.001, while physical capital intensity is also positively significant to productivity but at 5% level which is 0.019.

Still with the first model we realized that the second dependent variable of financial performance which is based on profitability. With this we discovered that the aggregate measures of intellectual capital value added intellectual coefficient is not significant to profitability but the control variables asset turnover and leverages are significant at 1% level with value 0.000 and 0.000 respectively while physical capital intensity is significant at 5% level with value 0.015.

Linear regression for model 2

As for this model, we shall examine the financial performance with variables such as ROA and EP with each of the independent variables to see which of the variable is positively related to the financial performance of micro finance in Yaoundé.

This will help us to verify our hypothesis stated at the beginning of our research. Firstly, we will have to verify that of HCE with the variables of financial performance. After the analysis we notice that it is not

significant with profitability (ROA) but it is significant with productivity (EP) at a significant level of 10% with value of 0.077.

Moving to the second independent variable that is SCE which reflect the second hypothesis we will verify from the regression tables in the appendix to see whether the SCE is significant to profitability and productivity of micro finance in Yaoundé. Again it is seen that SCE is not significant to the financial performance of micro finance in Yaoundé.

But for the third hypothesis the only independent variable that holds with the dependent variable is the CEE. The analysis show us that profitability is not significant to CEE but productivity is significant to 10% level showing that the hypothesis holds only for productivity as the dependent variable.

In the null shade, we realized that for profitability we notice the leverages and physical capital intensity which are control variables are significant at 1% and 5% level respectively while for productivity the control variables are significant at 10%, 1%, and 5% level respectively for each variables assets turnover, leverages and physical capital intensity with values as 0.051, 0.002 and 0.018.

We came to conclude that the hypothesis hold only for productivity for HCE and CEE while SCE did not hold and profitability did not hold as the hypothesis state but we were able to realize that HCE and CEE are positively associated with productivity of micro finance in Cameroon, Yaoundé.

5.1 Discussions

With globalization, Microfinance's are increasingly confronted with worldwide competition. In order to build and sustain their competitive advantages, the knowledge and expertise of organizations, staffs need to be seen as critical strategic resources. This research study investigates whether Intellectual Capital Efficiency can explain the financial performance of microfinance institutions in Yaoundé, Cameroon. We focused on the explanatory power of financial performance examined in two dimensions namely profitability and productivity.

5.2 Recommendations

The following recommendations should be a greater acknowledgment and incorporation of intellectual capital factors of production in Yaoundé, Cameroon.

5.2.1 Knowledge leadership

The performance of any organization, whether small or large, is directly related to the quality of its leadership. Good leaders will direct their organizations to greater heights of achievement in the domain of productivity and profitability. Leadership involves bringing about change, envisioning a new future for the organization and motivating people to commit and dedicate themselves to new directions. Cameroon needs good knowledge leadership in all her domain in the economy which will help her move forward. Intellectual capital efficiency is largely dependent on the ability and willingness of the chief executive officer of any organization to drive the process (Ramosedi 2000-2001).

Business executives should be able to channel their organization's intellectual capital as a source to achieve a competitive advantage. They should be held responsible for justifying the value of intangible that is being developed in their organizations. An organization's leadership should be committed to the development and implementation of a strategy for intellectual capital. Management will have to take the lead until an ideal self-motivating learning organization has emerged and the banner for knowledge management is flying high.

5.2.2 Education and training

To take advantage of the process of globalization, Cameroon should be able to produce goods and services of high quality and at competitive prices. It should be ensured that conditions are created through policy, law and a collective ethos that facilitate development. Education and training together form the vital weapon in a country to achieve these aims. Investment in the financial institutions of Cameroon should not be perceived to be a luxurious way of putting into use our knowledge to promote development. Education should become a basic human right that is essential for human dignity and for any good citizen.

Education is also vital for the achievement of economic and social development. Continuous training and development is the watchword for the modern Microfinance in Cameroon. Microfinance in Yaoundé, Cameroon should establish some aspects of their employee training programmed which will actually enhance productivity. Through understanding their intellectual capital, Microfinance in Yaoundé, Cameroon can redesign their training programmed to best enhance their assets.

5.2.3 Potential limitations of this research study

The findings of this study are subject to some limitations that provide initiatives for future research. One possible reason for the varied results of the study is the methodology used for measuring the value of intellectual capital. The focus of this study is on one specific measure of intellectual capital. The VAICTM methodology cannot prescribe in precise terms the actions that management or regulators should take in a company, business sector or economy to strengthen value creation. Similarly, this methodology does not provide stakeholders, such as investors, with a precise tool with which to deal with their specific interests in a business sector.

The methodology of value creation efficiency is only a power pointer that is an effective starting point from which to direct further in-depth investigation of any Microfinance, business sector or economy with the support of other measurement and management tools of intellectual capital. A future study could explore a different standardized measure for the performance of intellectual capital.

The authors believe that the basic theoretical construction of the regression models is correct. What is missing from the current study is accounting for the lag between the cost of implementing and investing in knowledge, human and intellectual capital and the subsequent observable results. Other research can be based on different hypotheses and also different regression models or constructions so as to have a different face of the previous study.

Future studies could use the same basic hypotheses and regression construction, but implement the study in terms of a longitudinal design which would need to correct changes in data relative to the time element, such as inflation. Despite possible limitations of using single-period data, a relatively focused sample and a single domestic location, the results of the present study provide valuable insights into the relationship between intellectual capital and the perceptions of a company's financial performance. Furthermore, this study contributes to the expansion of the current research study within the intellectual capital discipline towards alternative areas of interest.

5.3 Conclusions

This research study points out the role played by intellectual capital on the financial performance of Microfinance in Yaoundé. We came to conclude that the hypothesis holds only for productivity for HCE and CEE while SCE did not hold and for profitability did not hold as the hypothesis state but we were able to realize that HCE and CEE are positively associated with productivity of microfinance in Cameroon, Yaoundé. These results are particularly promising, because they reveal the possibility that investments in intellectual capital at a given point in time may influence the prosperity of Microfinance, in terms of earnings and profits, which hopefully will influence shareholder value at a later date.

However, they represent only another step in the process of creating and setting standards for the knowledge era. Nevertheless, there is compelling evidence that investments in intellectual capital efficiency do matter. If this assertion is true, it will result in profound changes in the ways in which Microfinance work and the way they are valued in Yaoundé, Cameroon. The rise of intellectual capital is inevitable, given the historical and technological forces that are sweeping the modern world. Intellectual capital will come to dominate the way in which institutions are valued, because it alone captures the dynamics of organizational sustainability and value creation. Intellectual capital alone recognizes that modern Microfinance changes so rapidly that everything dependent on its talents, the dedication of its people (human capital) and the quality of the tools that they use (structural capital).

The Cameroonian government and business community should stand up and be counted as part of this intellectual capital movement and be better prepared and more experienced than its competitors. This will help tossed forward our effort so as to meet up the objectives of any develop economy.

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