

# Households' Determinants of Demand for Financial Credits in the City of Bukavu

Vwima Ngezirabona Stany\*, Muzee Kazamwali, Ngomora Ciza Odette

Evangelical University in Africa

\*Corresponding author: [svwima@uea.ac.cd](mailto:svwima@uea.ac.cd)

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**Abstract** In the DRC and particularly in the Bukavu city (It is the capital of the province of South Kivu. It is located 180 km from Goma by lake and 207 km by road (DRC, Ministry of Planning, PRSP Process Steering Unit, 2005a), 1650 km from Kinshasa (capital of the DRC) as the crow flies, 120 km from Uvira by road and 15 km by road only from Kamembe (Rwanda). It is a city that extends over 60 Km<sup>2</sup> with a population growth rate of 3.3% per year. It is located in the Eastern Valley of the Graben, specifically the Great Lakes region at 2°30'S and 28°50'E. The city is lucky to have a rainy climate for more or less 8 months (September-mid-June). The average temperature rarely exceeds 20° in Bukavu. It is weighted by the presence of Lake Kivu. The rainfall amounts to 1320 mm at 1670 m altitude. According to the report of the Bukavu City Council of 2013, the population of Bukavu city is estimated at 718,210), there is a growing proliferation of financial institutions, especially microfinance institutions (MFIs), which by definition have the main mission to fight against poverty by offering financial services (including loans) even to the poorest people who do not have access to formal financial services. The main concern of this work is to highlight the different factors that could influence the behavior of households in Bukavu to ask for financial credit. This work is limited to the Bukavu city and data were collected from 147 household heads. To analyze the data, the Lesser Ordinary Square Model was used with dependent variable (the amount of credit) and independent variables (the income of the household head, the household size, the interest rate, the reimbursement deadline, assessment of the guarantees requested, credit information, sex of the household head, age of the household head, marital status of the household head, education level of the household head). The model selected explained to 57.6% (R<sup>2</sup>) the amount of credit requested which is the dependent variable. The results of the econometric analysis show that it is the income, repayment term, study level and gender variables that significantly explain the amount of credit requested by households in Bukavu. All of these variables have a positive influence on the credit amount. The result obtained from this analysis was that households requested more loans from MFIs (85.4%) than from banks (15.6%). It was noted that households in Bukavu allocate more credits to investment (80.2%) than consumption (29.8%).

**Keywords:** credit demand, bank, Microfinance, Bukavu

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## 1. Introduction

Although resorting to a loan can improve the welfare, the recent situation in some countries shows that excessive debt and looser lending standards can also weaken households in the face of negative shocks and amplify risks to the financial system [1]. Beyond the changes in the household environment and changes in their consumption habits, the use of credit is still a decisive element in the realization of real estate and consumer projects [2]. A comprehensive review of these issues cannot be done solely on the basis of aggregated credit data, as they obscure crucial aspects of borrower behavior. In fact, the demand for credit varies considerably from one household to another, depending on characteristics such as age, income level and whether or not they have a home, variables that also affect the disposition of the lending

organizations. This means that the breakdown of the debt between the different categories of households is essential information to identify the factors contributing to the use of total indebtedness [3]. Several forms of financial institutions, such as microfinance institutions, savings and credit cooperatives, or mutual institutions, are means of reducing the rate of financial exclusion observed, particularly within the financial poor sector [4,5] but, for Kadir [6], despite efforts and some progress achieved so far, much remains to be done both in urban and rural areas to facilitate to households access to financial products in their different forms (savings, insurance and credit). According to [7], in many developing countries, microfinance has always been presented as an alternative to the financial difficulties faced by the population. The Democratic Republic of Congo does not seem to be in the margin of this scenario, and although the poverty rate is still one of the highest in the world, the proliferation rate of microfinance institutions continues to increase. The

Bukavu city, for example, already has strong competition between conventional financial institutions and the Microfinance Actor Group, thus diversifying the supply of financial products [8]. The use of credit by households in Bukavu, as a source of financing, is now a decisive element in the realization of various projects, both real estate and consumer. Also, understanding the factors contributing to this decision remains a major asset in a booming city in microfinance. Numerous studies such as [9,10,11,12], have indeed addressed the questions relating to the demand for financial services by households in Sub-Saharan Africa. It can be seen, however, that financial credits and savings have remained at the heart of their major concerns [13]. And although others have already begun to address the third constituent of the financial trinity (insurance), the literature on the first two aspects in the Bukavu city is not yet abundant. This is the concern of this study which mainly aims to understand the factors determining household debt in the Bukavu city. It also aims to identify the type of financial institution most requested when applying for credits. It finally tries to see if the households show a certain rationality. Thus, the following questions have guided the this study central thread: "What are the factors determining the use of credit within households of Bukavu? "To which type of financial institution are most of the credit applications submitted? "What type of credit is being sought by the requesting households? In other words, which of the real estate and consumer projects are the credits requested the most affected? "

## 2. Theoretical Context

### 2.1. Definitions, Roles and Types of Financial Credits

The credit expresses a financial relationship between two parties, the creditor and the debtor, based on trust and the time passage, in this case the time between the loan and its repayment [14]. For Petit-Ditaillis quoted by [15]: *"To credit is to trust; it is to give freely the effective and immediate disposition of a real good, or a purchasing power, against the promise that the same good, or an equivalent good, will be restored to you within a certain time, most often with remuneration for the service rendered and the danger incurred, danger of partial or total loss inherent in the very nature of this service "*. This definition makes it possible to highlight the three credit supports: time, trust and promise, because there can be no credit without these three elements. A credit is an advance of money to make an expense when you do not have enough money: either you save and delay the expense until you have accumulated enough money; or you borrow the amount necessary to realize the expense immediately. In this sense, the credit therefore makes it possible to realize an expense that will be reimbursed later (often gradually) and with the interest payment. For [16], *"credit remains a means that allows the use of an anticipated income for investment or current consumption"*. For [15], no economy can deny the role played by credit in terms of trade facilitation, stimulation of production, amplification of development and finally its role as a monetary creation instrument. The literature distinguishes two types of credit:

productive and non-productive credits [16]. [17] and [18] give other typologies of financial credits according to the nature of the beneficiary of the credit in which the credit granted to households is differentiated (leasing, consumer credit, real estate credit, long-term credit, business credit) and those granted to businesses (operating or cash credit, investment credit, export credit, leasing, factoring) and credit duration (short-term credits or operating credits, medium-term credit and long-term credit or investment).

### 2.2. The Congolese Financial System

For the DRC, as of August 31, 2013, the congolese financial system consists of: 1 central bank, 18 approved commercial banks, 2 specialized financial institutions, 1 savings bank, 82 cooperatives, 14 microfinance institutions, 37 approved financial couriers and 14 approved currency exchange offices (CCB report, 2013). The bank rate remains low. For Schwarz [10], for a DRC population estimated at about 67 million inhabitants, only about 600,000 bank accounts are open. This implies that less than one percent of the population has a bank account, compared with an African average of 5%. Even assuming that more than 60% of the population is under 18, this would still involve around 20 to 25 million adults without a bank account.

In South Kivu, the 2012 BCC report shows that the Institution of the Decentralized Financial System (ISFD) registered 33 local financial institutions (including 30 COOPECs and 3 MFIs) in 2012, compared to 38 in 2011 (36 COOPEC and 2 MFIs). Despite this significant number of savings cooperatives in South Kivu, financial and credit coverage is exclusively urban and geographically limited to the city of Bukavu for the most part. Many SACCOs, however, have serious management problems and a fragile financial situation, sources of recurring and resounding bankruptcies in a sector whose pro-urban bias is evident. In 2012, 61% of the ISFD was located in the Bukavu city, 6% in the Uvira territory, 9% in Fizi, 12% in Kabare, 3% in Mwenga and 12% in Walungu. For Vwima (2015), the emergence of a micro-credit sector supported by some private institutions (PAIDEK, PLD, ADI KIVU, SIKASH, ...) and some savings cooperatives (NYAWERA, ...) are trying to compensate for the insufficiency of funding but the coverage rate is still very low to cover funding needs. Loans granted are often short-term. With the demand for material guarantees and high interest rates, these loans are increasingly oriented towards the sales sector (78%), housing (10%), consumer (7%) and others (4%) and only 1% to the agricultural sector.

### 2.3. Determinants of Financial Credit Demand by Households

The development of viable financial institutions is still a major challenge in many African countries, making financial inclusion a goal not yet achieved. Sub-Saharan Africa in particular is known as one of the world's most lagging regions in terms of financial development [11] while, according to [19] and [20], many barriers to growth and / or development can therefore be circumvented by viable financial institutions. Nevertheless, in the absence of such institutions, poverty and inequality would persist.

The issue of financial services, as noted above, has been the subject of many studies in Sub-Saharan Africa in recent decades. In addition to the problems of access to financial services [11], the literature available on the subject remains particularly dominated by the first two components of the financial trinity: savings and credit. Some studies have tried to address all three components at the same time, but still remain few [9]. Qualified by [21] as the forgotten financial component during the 1990s, insurance has also attracted the attention of researchers for some time. For example, there are few studies in developing countries showing that demand for insurance remains strongly influenced by household wealth and educational attainment [22,23], and therefore hardly accessible to the poor. As the sector is still underdeveloped in many African countries, the issue remains poorly documented. For example, most previously-known studies of financial services have attempted to address savings and credit issues on the one hand, but few have addressed them at the same time. In terms of credit, for example, many authors revisit credit access issues [5,6,12] with credit rationing [12], and the determinants of credit request [5,7,13,24,25] both in urban and rural areas, and for both households and small and medium-sized enterprises. As the present study is particularly concerned by the determinants of the financial credit requests, the latter aspect will be more fully addressed in this point. The financial credits request depends on several criteria related to both the supply and the profile of the individuals or households applying for these credits. As specified by Mpuga [5], who addresses both issues related to access to and credit request in Uganda, the socio-economic characteristics of individuals such as age, gender, level of education as well as marital status are particularly important in applying for credit from financial institutions in a formal way. Considering the life-cycle hypothesis, the author shows that the youngest have a strong propensity to solicit credit than the senior citizens because for the most part considered to be in perfect physical condition and characterized by the ambition of get high income. Young people are therefore more active in terms of saving / dissaving in order to accumulate wealth. They are therefore more inclined to borrow and / or save for investment reasons than older people. This opinion is also shared by other authors such as [26,27,28] who believe that age is positively correlated with demand for credit. With regard to gender, it should be noted that in most African societies, particularly in Kivu, the roles within households are for the most part shared between the two sexes. Most often men are those with a decent, well-paid job, while women tend to do housework, children, and petty trading. Although the situation seems a little balanced in urban households, it is still observed that men always have the last word for any household financial matters, as they are still considered heads of households [29]. Nevertheless, it has been observed that in countries like Ethiopia, women's requests for credit from financial institutions often won their case. The reasons for this are, inter alia, the social goal of microfinance institutions to reduce gender inequality, but also that women contribute more to the well-being of their households and demonstrate more credibility than men. Other forms of credit often obtained informally from

family members or friends are most often given to men [11]. Literature also shows that more literate people are more prone to financial education than less literate ones [29]. They also have a well-paid job and therefore have the means to enable them to provide a guarantee when applying for a loan from financial institutions [5]. With regard to marital status, married people tend to inspire more confidence than singles because of their family responsibilities. Other aspects such as household income are particularly important especially as they enhance household repayment capacity. [26] has shown that in Kaziba, South Kivu (Democratic Republic of Congo), the more a household is rich, the easier it will be to claim credit, especially since it would be able to obtain movable and immovable property that can be used as collateral in case of default. It would also be important not to overlook the fact that many households that have experienced fluctuations in income as a result of adverse circumstances will also tend to resort to debt [21]. Thus, [30] showed that in Burkina Faso, many households resorted to borrowing not to initiate a new economic activity but to reinforce an activity that was affected by any shock. Another salient aspect at the household level is particularly the number of dependents. Nevertheless, its effect on the credit request remains ambiguous. Guérin et al. [31] show that the disgrace of debt in rural Magreb is recognized as a factor of reluctance to indebtedness. In this context, various theoretical contributions have reinforced the idea that group loans involving joint liability were effective in facilitating access to loans for a large number of poor people [6]. Credit request is also significantly influenced by financial institution attributes, particularly factors such as the interest rate, the availability of financial institutions in the environment where the household resides, and the distance between households and microfinance institutions or banks [12]. To this list of variables, would be added the deadline set by financial institutions for both banks and microfinance institutions, and the assessment of the proposed guarantees [26,29]. This comprehensive overview of several studies conducted in Sub-Saharan Africa and in developing countries shows the relevance of this study and especially the need to know the main factors likely to influence the credit request in the Bukavu city is an urban environment, where for a long time it has been a boom of the microfinance sector.

### 3. Methodology

In this work, two types of data were used namely: secondary data and primary data. Secondary data (documentation, reports of the Central Bank of Congo, reports of the Bukavu City Council, ...) served to establish a theoretical framework of this work. Primary data was collected on the basis of a questionnaire survey with an occasional sample of 156 households having already applied for credit and having received credit from banks and MFIs in the city of Bukavu. This sample was distributed in the three communes of Bukavu as follows: Ibanda (53), Kadutu (61) and Bagira (42). This survey was conducted for two months (November and December 2014). The data analysis was performed using a quantitative dependent variable multiple regression model whose

description of the variables is presented in Table 1. The model used is inspired by that of [16] but adapted to

context of Bukavu. As for data processing, the latter was done using SPSS 16 and E-Views 3.1 software.

**Table 1. Description of variables**

| Variables                              | Acronyme   | Modalités et mesures  | Signe attendu |
|--|------------|---|---------------|
| DEPENDENT VARIABLE                     |            |   |               |
| Credit demand                          | CREDAMOUNT | Quantitative variable:: the amount of the last credit requested   |               |
| INDEPENDENT VARIABLES                  |            |   |               |
| Income of the household                | INCOME     | Quantitative variable: declared income by the respondent  | +             |
| Household size                         | HOUSI      | Qualitative Variable: the number of dependents of the household head  | +/-           |
| Interest rate                          | INT        | Quantitative variable: financial expenses borne   | +/-           |
| Repayment term                         | REPAT      | Quantitative variable   | +             |
| Assessment of the guarantees requested | AGR        | Qualitative Variable; 1 if the guarantees are considered less restrictive, 0 otherwise.   | -             |
| Credit information                     | CI         | Qualitative Variable; 1 if the head of the household estimates that he has sufficient knowledge of the credit conditions, otherwise 0                             | +             |
| Sex of the household head              | SEX        | Qualitative Variable; 1 if the head of household is a man, 0 if it is a woman.  | +             |
| Age of the household head              | AGE        | Quantitative variable: number of years since birth until 2014.  | +             |
| Marital status of the household head   | MARISTA    | Variable qualitative; 1 if the head of household is married, 0 otherwise  | +/-           |
| Education level of the household head  | EDULEV     | Qualitative Variable; 1 if no level of study, 2 if level of primary education, 3 if level of secondary education and 4 if level of higher education or university | +             |

### 3.1. Model Specification

The dependent variable selected for this work is the credit application. This variable is quantitative and is measured by the amount of the last financial credit requested by the household. The choice of variables likely to explain the demand for financial credits by households was inspired by the literature and context of Bukavu (monthly income, household size, interest, repayment term, assessment of the guarantee, credit information, sex, age, marital status, level of education. Having a quantitative dependent variable, the model parameters were estimated by the ordinary least squares method. The explicit form of the model is therefore as follows:

$$\begin{aligned}
 &CREDAMOUNT \\
 &= \beta_0 + \beta_1 INCOME + \beta_2 HOUSI + \beta_3 INT \\
 &+ \beta_4 REPAT + \beta_5 AGR + \beta_6 CI + \beta_7 SEX \\
 &+ \beta_8 AGE + \beta_9 MARISTA + \beta_{10} EDULEV + \varepsilon_i
 \end{aligned} \quad (1)$$

With: CREDAMOUNT: amount of the requested credit;  $\beta_i$ : the estimating parameters; INCOME: the income of the household; HOUSI: the household size; INT: the interest rate; REPAT: the repayment term; AGR: the assessment of the guarantees requested; CI: credit information; SEX: sex of the household head; AGE: age of the household head; MARISTA: marital status of the household head; EDULEV: Education level of the household head;  $\varepsilon_i$ : the error expression.

The model thus specified is only a caricature of reality. Indeed, to retain only the variables above to explain the demand for credits is obviously even insufficient; there are several other factors that may explain this demand. Hence the presence of a random term  $\varepsilon_i$  which synthesizes all of this information not explained in the model.

### 3.2. Model Validation Test

To validate the model used in this study, the Fisher-Snedecor test was used. This test made it possible

to judge the overall significance of the model. The model will be generally good when the P-value associated with the Fisher-Snedecor test is lower than the chosen threshold of 0.05, otherwise it will not be good.

## 4. Results

### 4.1. Socio-economic Sample Features

#### 4.1.1. Respondent Distribution according to the Gender, Age, Marital Status, Education Level and Income

**Table 2. Respondents' structure by gender, age, marital status, education level and income (n=156)**

| Variables       | Modalities        | Number | Percentage | Descriptive stat. |
|-----------------|-------------------|--------|------------|-------------------|
| Gender          | Man               | 109    | 69,87      |                   |
|                 | Woman             | 47     | 30,13      |                   |
| Age (years)     | Less than 24      | 2      | 1,3        |                   |
|                 | From 24 to 26     | 7      | 4,5        |                   |
|                 | From 26 to 28     | 6      | 3,9        |                   |
|                 | From 28 to 30     | 14     | 9,0        |                   |
|                 | From 30 to 32     | 13     | 8,3        |                   |
|                 | 32 and more       | 114    | 73,1       | 39±10,76          |
| Marital status  | Bachelor/single   | 26     | 16,67      |                   |
|                 | Divorced/divorcee | 6      | 3,85       |                   |
|                 | Married           | 114    | 73,08      |                   |
|                 | Widower           | 10     | 6,41       |                   |
| Education level | Illiterate        | 2      | 1,28       |                   |
|                 | Primary           | 7      | 4,49       |                   |
|                 | High school       | 77     | 49,36      |                   |
|                 | Higher acad/Univ. | 70     | 44,8       |                   |
| Income (\$ US)  | Less than 200     | 40     | 25         |                   |
|                 | From 200 to 400   | 49     | 31,4       |                   |
|                 | From 400 to 600   | 34     | 21,8       |                   |
|                 | From 600 to 800   | 23     | 14,7       |                   |
|                 | From 800 to 1000  | 7      | 4,5        |                   |
|                 | From 1000 to 1200 | 2      | 1,3        |                   |
|                 | 1200 and more     | 1      | 0,6        | 396,38±257,98     |

The socio-economic characteristics of the sample (see Table 2) suggest that men are more represented than women (68.87% vs. 30.13%). This situation shows once again that men remain heads of households in most tribes in South Kivu. They also remain first responders for any household financial matters. More than the majorities (73.1%) of respondents are adults (39 years on average) with a high concentration in the age group beyond 32 years. This situation can be explained by the fact that the age of majority is recommended to hold an account and to commit to apply for a credit. Many of them are married (73.08%) and therefore responsible for families with most of them having a secondary level of education (49.36%). The presence of fewer and fewer illiterates is explained by the presence of the documents to be signed and the forms to fill out for the request for credits. As for income, it is observed that half of our respondents have an income ranging between 200 and 600 \$ U.S.

**4.1.2. Respondents Distribution by Occupation**

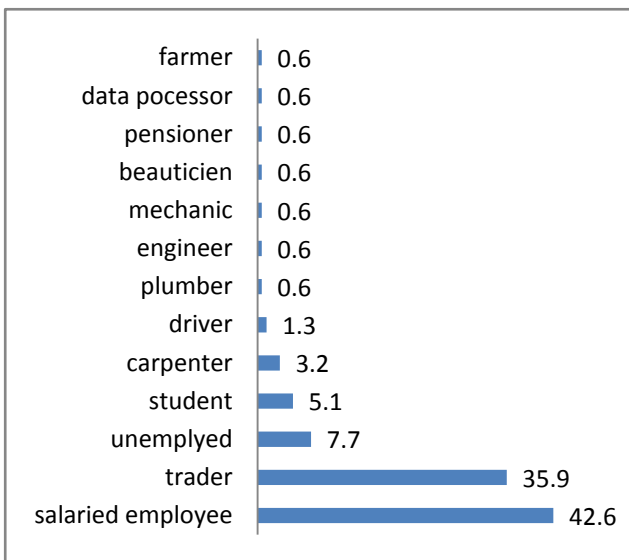


Figure 1. Respondents structure by occupation (n=156)

42.6% of respondents are employees and 35.9% are traders of whom many work in the informal sector. This situation can be explained by the fact that trade and administration is the most dominant sectors of activity in the Bukavu city. Heads of jobless households represent a

sizeable number (7.7%). Unemployment is therefore of great importance in the city.

**4.1.3. Household Size**

More than 37% of households are made up of 4 to 7 people. The minimum size of a household is one person and the maximum size is 19 people, with an average of 6 people for a household. This reality does not differ so much from the national situation, according to which the average size of a Congolese household is 5 people [31].

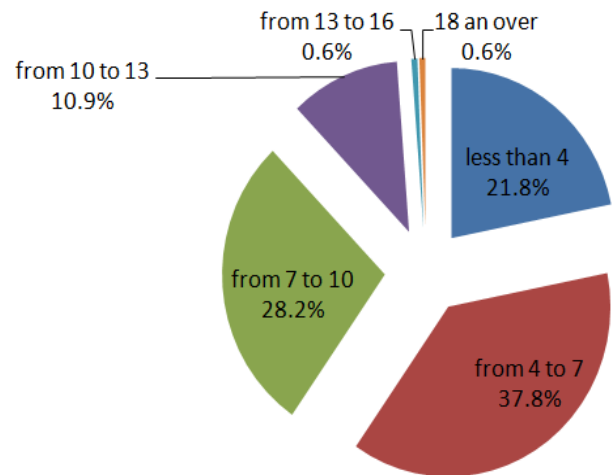


Figure 2. Respondents distribution by household size (n=156) (Min=1; Max=19; Sum=933; average 5,98; Standard deviation: 2,91)

**4.1.4. Respondents Distribution by the Credit Information Level, the Guarantee Appreciation and the Interest Rate**

Of the 156 households that used credit, 60.8% felt that they had sufficient knowledge of the conditions for granting and repaying loans, compared to only 39.2% who did not feel they had any. In this case, the probability of using credit is high, especially since a large number of households have sufficient information regarding the granting and repayment of loans. The survey shows that more than 53% of informed households find this information with agents of financial institutions while less than 47% find it elsewhere (website, friends and acquaintances, documents published by the financial institution, etc.).

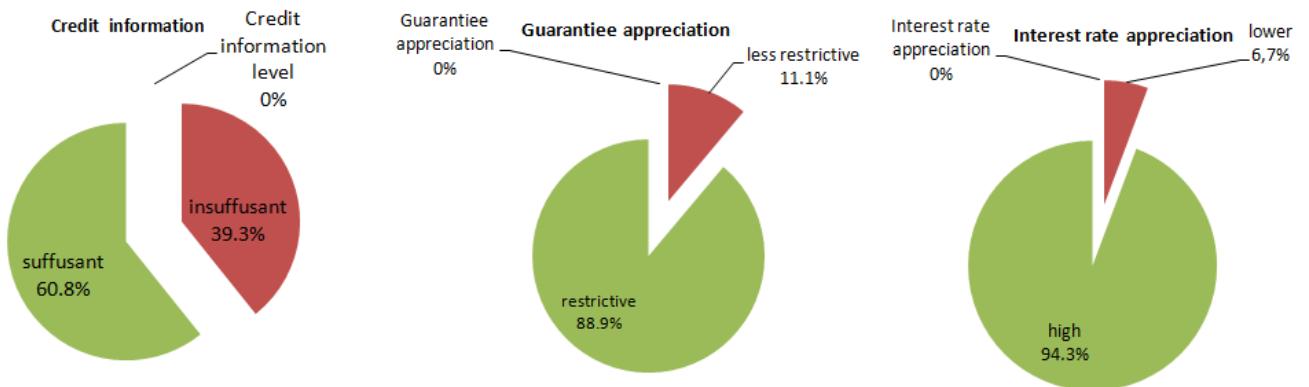
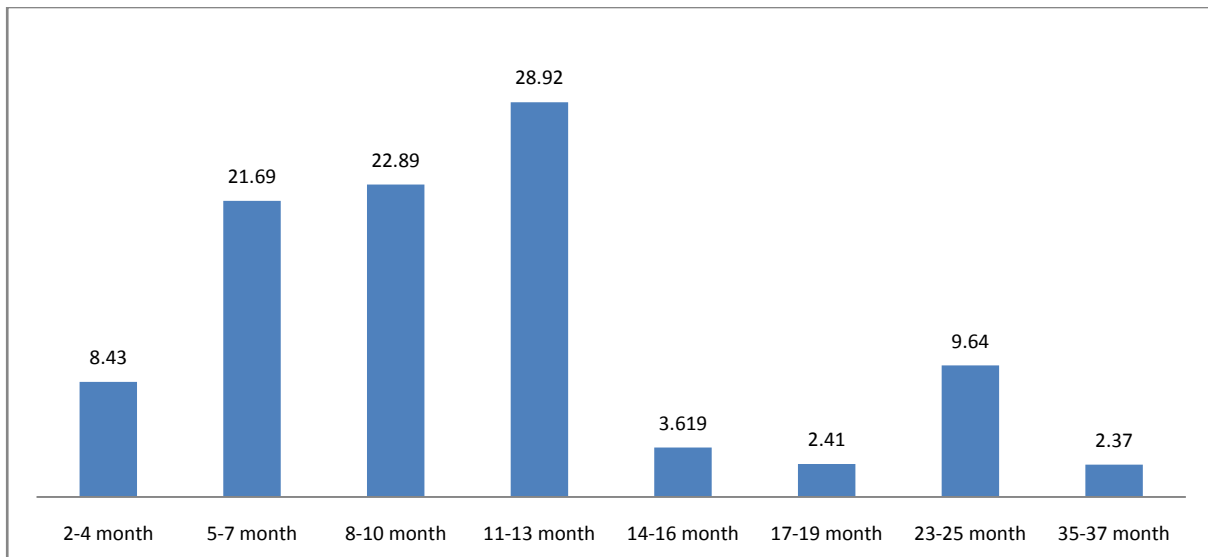


Figure 3. Respondents structure by the credit information level, the guarantee appreciation and the interest rate (n=156)



**Figure 4.** Respondents distribution according to the repayment deadline (%): n=156 (Minimum: 2; Maximum 36; Average 11,24; standard deviation: 6,746)

A large proportion of households (88.9%) believe that the guarantees requested by financial institutions are binding. Too few households meet this guarantee condition to access high credit amounts. The largest proportion of households (94.3%) believe that the interest rate is high and only less than 6% of households feel that it is lower. This situation is negatively correlated with the amount of credit requested, i.e. the higher the interest rate, the more households reduce their use of credit.

**4.1.5. Respondents Distribution According to the Repayment Deadline (Monthly)**

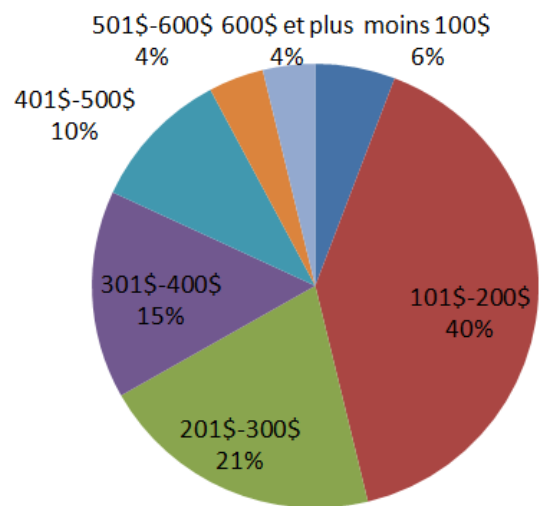
The average deadline granted to households is 11.24 months and their loan request is high when the repayment term is long. This request is weak in the opposite case.

**4.1.6. Respondents distribution according to the amount requested**

Figure 5 shows that more than 46% of respondents contracted a credit of less than \$ 200. These low credits essentially reflect a problem in terms of household request and loan conditions by financial institutions. Several factors explaining this low credit amount can be cited: the lack of confidence in households, the absence of guarantees, the profile of the entrepreneur, lack of confidence in the project, low capacity of household repayments, excessive risk.

In Bukavu, household loans represent a significant share of income, i.e. 51.6%. This debt ratio varies depending on whether the household has claimed credit from the Micro Finance / Cooperative Institutions (47.4%) or the bank (62.7%). This difference can be explained by a

high request for bank-oriented credit compared to microfinance institutions / cooperatives. This debt ratio also varies according to the credit allocation by households in the Bukavu city. It is lower when it is an investment credit (37.6%) and higher when it is used for consumption (64.1%). This high share of debt ratio for consumer loan consumer households can be explained by low income that fails to cover total consumption. It should be noted that, although the use of borrowing can increase welfare, but facing an exogenous shock, excessive debt can weaken households, especially when the debt is oriented towards consumer credit.



**Figure 5.** Respondents structure according to the credit amount (%): n=156 (Minimum: 30; Maximum: 1300; Average: 204,6; standard deviation: 111,9)

**Table 3. Bukavu town household debt ratio**

| Specifications       | Total n=156 | Applicants for credits to MFI/COOPEC n=124 | Applicants for credits to Banks n=32 | Applicants for investment credit n=125 | Applicants for consumer credit n=31 |
|----------------------|-------------|--|--------------------------------------|--|-------------------------------------|
| Income (1)           | 396.38      | 97.7                                       | 412.2                                | 317.8                                  | 154.15                              |
| Credit (2)           | 204.6       | 46.3                                       | 258.5                                | 119.6                                  | 98.8                                |
| Debt ratio = (1):(2) | 0.516       | 0.474                                      | 0.627                                | 0.376                                  | 0.641                               |

## 4.2. Analysis of the Financial Credits Requested by the Bukavu Households

### 4.2.1. Credit Request and Financial Institutions

The Savings and Credit Cooperatives (SACCOs) are more in request (65.1%) in credit than the rest of the financial institutions. They are followed by commercial banks (20.48%) and MFIs (14.46%). The diversity of financial products offered by SACCOs and / or savings and credit mutuals, currently dominating the financial sector at the provincial level, as well as accessibility (condition of award and repayment) to their services make the latter attracting more and more attention from households. MFIs are not too numerous because of their embryonic nature, this would explain the small proportion observed. Nevertheless, rallying the COOPEC to MFIs and thus ignoring the slight difference between these two players in microfinance, we note that the request addressed to them represents 79.5% against only 20.5% for banks.

Microfinance Institutions essentially target not only micro and small enterprises in the trade sector but also workers. These two categories of agents remain dominant in the city of Bukavu. Referring to their mission, these MFIs aims to reduce poverty by developing the local economy, reason why they have a considerable market share in terms of households adhering to banks. It should be noted that, with the liquidity crisis that some cooperatives (Imara, MECREBU, Tulinde Hazina) and banks (BIAC) are experiencing, household confidence in

the financial system is decreasing. Some households still think of returning to hoarding.

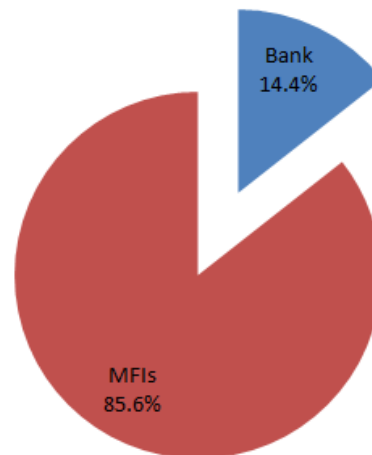


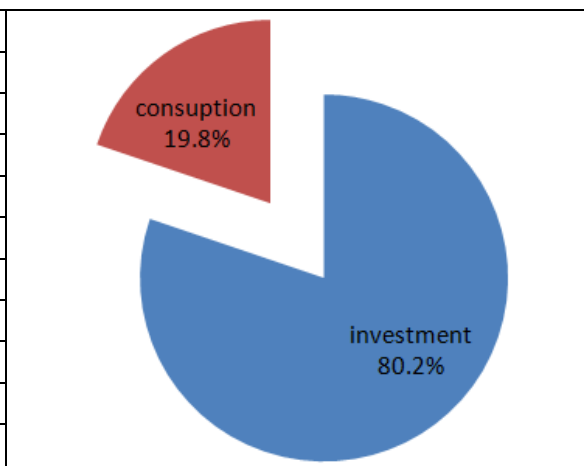
Figure 6. Credit request and financial institutions: n=156

### 4.2.2. Use of the Credit Received

The largest share (46.5%) of the credits received by households in Bukavu is allocated to trade. It is worth remembering that many of our respondents are merchants. The construction, the purchase of buildings as well as the payment of school or medical expenses are also the most recurrent as assignments made of the requested credits. In this case, it is observed that the financial credits requested from financial institutions are for the most part investment credits (80.2%) against 19.8% of consumption credits.

Table 4. Use of credit received (n=156)

| Specifications                      | Nature      | %    |
|-------------------------------------|-------------|------|
| Trade                               | Investment  | 46,5 |
| Building or building purchase       | Investment  | 27,9 |
| Private transport means purchase    | Consumption | 4,7  |
| House equipment                     | Consumption | 2,3  |
| Debt repayment                      | Consumption | 3,5  |
| Use for farming                     | Investment  | 2,3  |
| Public transport means purchase     | Investment  | 3,5  |
| Funeral                             | Consumption | 1,2  |
| School fees or medical care payment | Consumption | 8,1  |
| Total                               |             | 100  |



## 4.3. Factor Determining the Financial Credits Request

### 4.3.1. Econometric Analysis

The basic model is composed of the ten explanatory variables. Thus, the result of the model shows that three variables (maturity, level of study, monthly income) significantly explain the demand for credit at the 5% threshold; and a variable (sex) explains it at the 10% threshold. Significant effects on the credit sought would be observed whenever there is a change in the repayment term, the level of education, the monthly income of households or sex. An increase in household income

would increase the amount of credit requested. The positive signs also indicate that the longer the financial institutions grant longer maturities, the more households would use their services. As for the level of study, this gives the heads of households the ability to understand the different criteria set by the financial institutions and how to direct their choice in terms of credit demand. In addition, households with male heads are more likely to solicit high credit than those headed by men. The information provided by the coefficient of determination (= 0.576291) shows that the percentage change in the amount of credit requested attributable to the explanatory variables is 57.6%.

Table 5. Econometric model results

| Dependent Variable: MONTCRED |             |                       |             |            |
|------------------------------|-------------|-----------------------|-------------|------------|
| Method: Least Squares        |             |                       |             |            |
| Date: 01/18/15 Time: 14:37   |             |                       |             |            |
| Sample: 1 156                |             |                       |             |            |
| Included observations: 156   |             |                       |             |            |
| Variable                     | Coefficient | Std. Error            | t-Statistic | Prob.      |
| AGE                          | 6.919330    | 6.841709              | 1.011345    | 0.3135     |
| CREDIT INFORMATION ACCESS    | 73.36376    | 118.2875              | 0.620216    | 0.5361     |
| APPRECIATION GUARANTEE       | -46.86686   | 146.5693              | -0.319759   | 0.7496     |
| DEADLINE                     | 10.23104    | 11.63901              | 8.790302    | 0.0000 (*) |
| CIVIL STATUS                 | -55.00683   | 113.5748              | -0.484322   | 0.6289     |
| HOUSEHOLD SIZE               | -2.949046   | 23.05592              | -0.127908   | 0.8984     |
| EDUCATION LEVEL              | 22.97424    | 106.3451              | 2.160349    | 0.0324 (*) |
| MONTHLY INCOME               | 0.884735    | 0.263434              | 3.358464    | 0.0010 (*) |
| SEX                          | 23.86541    | 143.1322              | 1.667368    | 0.0976     |
| INTEREST RATE                | -13.73418   | 30.13998              | -0.455680   | 0.6493     |
| C                            | -1530.658   | 720.6968              | -2.123858   | 0.0354     |
| R-squared                    | 0.576291    | Meandependent var     |             | 678.2051   |
| Adjusted R-squared           | 0.547070    | S.D. dependent var    |             | 1107.805   |
| S.E. of regression           | 745.5538    | Akaike info criterion |             | 16.13404   |
| Sumsquaredresid              | 80598325    | Schwarz criterion     |             | 16.34909   |
| Log likelihood               | -1247.455   | F-statistic           |             | 19.72159   |
| Durbin-Watson stat           | 1.958456    | Prob(F-statistic)     |             | 0.000000   |

#### 4.3.2. Global Model Significance Test: Fisher-Snedecor Test

This is a question of checking, if the coefficient of determination ( $R^2$ ) whose value is 57.6% (according to the regression table) is statistically different from zero. To do this, the Fisher-Snedecor test (19,72159) was used. Since the P-value associated with the Fisher-Snedecor test (0.000) is below the threshold of 0.05; it is concluded that the model is globally significant.

#### 4.4. Discussion of Result

As regards the allocation of the credit received (or the nature of the credits requested), this study led to the result that the credits requested by households in Bukavu are dominated by investment credits. Secondly, there are consumer credits. This result is in contradiction with that found by a study by Mouillart [1], according to which, the credit holding rate is 46.5% in 2014 with a predominance of real estate loans (30.6%) followed by credit consumption (25.6%). The study shows that households in the Bukavu city request more loans from microfinance institutions, while a small proportion of household applies for credits to the banks. This result corroborates that found by Schwarz [10]. The results of the econometric analysis show that the income, maturity, education and sex variables significantly explain the amount of credit requested by households in Bukavu. All of these variables have a positive influence on the amount of credit. As the theory predicts, the econometric results point to positive signs for all three variables. Indeed, the income of the

head of household influences positively and significantly the amount of credit. This is justified by the fact that, the higher the household head's income is, the more he will seek a financial credit of a high amount to the extent that his income will not only serve as a pledge, but also, allow him to settle the amount of the loan within the agreed term. This result corroborates that obtained by [16] at the end of her study on the request for women's credits in the East Center of Burkina Faso. Similarly, the repayment term explains positively and significantly the amount of credit requested by households. This implies that the amount of credit requested by the household will be all the more important that the deadline granted to it is of long duration. A long term allows the household head to repay the loan as and when he goes. This result corroborates that of [32] in rural Morocco, but it is in contradiction with that found by [33] in Morocco. He has shown from his analyzes that the longer the loan repayment period, the higher the risk of default becomes high and this makes it impossible for the household to apply for loans in the future. The education level of the household head also positively and significantly impacts the credit amount. This means that the higher household head has a high level of education, the more he will solicit high credit. This is because, having a high level of education, he will be able to manage with the amount of credit received and with his income in order to settle the debt contracted. This makes it credible to financial institutions and allows it to solicit large amounts of money. This result is similar to that obtained by [33]. For gender, the proportion of men using credit is higher than that of women. Indeed, since according to the custom of the place, the man is the head of household, it is very obvious that it is he who makes commitments of this kind within the household. This result contradicts those found by [29] and [26], respectively in Makerere and Bukavu. The results of these two studies show that women claim more credit than men because they are the most supported by MFIs and are much more involved in small income-generating activities.

#### 5. Conclusion

Throughout this study, the major concern was to highlight the various factors that could influence the behavior of households in Bukavu to apply for financial credit. The methodological approach used shows that households make more use of MFIs when applying for credit than to commercial banks. It is also observed that many of the requested credits are oriented towards investment than consumption. As for the econometric analyses, these reveal that the level of study, the income of the head of household, the fixed deadline and the gender are the most determining in the credit use by the households of the Bukavu city. To increase the demand for credit by households in the Bukavu city, it is therefore necessary that financing services are more adapted to the real needs of these populations of whom most are poor and work in the informal sector, but also to restore trust between these households and financial institutions that was broken after the liquidity crisis of a large number of micro finance institutions and banks.



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