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Public Incentive Mechanism, Access to Credit, Household Current Well-being, and Expectation on Future Prosperity in Togo

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Abstract **-** *In January 2014, the Togolese Government launched the National Fund for Inclusive Finance. The role of the Fund is to strengthen the financial and operational capacities of decentralized Financial Service Providers to permanently meet the needs of local financial products expressed by individuals and communities who do not have access to traditional financial services. This paper aims to analyze the impact of this government incentive mechanism for access to a microfinance institution on small business profits of households and well-being in Togo. The study uses data from the Harmonized Survey of Household Living Conditions conducted in 2019 by the National Institute of Statistics, Economic and Demographic Studies on 6,171 households. The paper uses the instrumental variable quantile method. The result shows that access to credit significantly improves both households' current well-being and their expectation of future prosperity, in a complementary way, by enhancing their business profits.*

Keywords - *Household Small Business, Hedonic financial capital; Eudemonic Financial Capital, Current Well-being; Future Prosperity; Togo.*

JEL: O; O1; O10

I. INTRODUCTION

Well-being and prosperity have been the concern of all nations irrespective of their stages of development. While many theories are dedicated to economic and prosperity, the common element that many of them have is access to credit. If talented households are allowed credit access, they can invest in capital that will increase their income. Following the success of the Grameen Bank, microcredit is now being staged as a global movement. It has become an excellent indicator of economic, social, and cultural opportunities. Indeed, given the credit exclusion suffered by the poor at the hands of banks, which are subject to immediate profitability constraints and specific prudential ratios, microcredit has set itself to ensure a minimum level of equity in the financial system. It responds to social injustice problems and individuals and their community's well-being. Microcredit is, therefore, a social innovation centered on the individual. After all, it responds to the fight against poverty and the community because its objective is to develop a given territory to improve life quality. It is articulated around a strategy based on a participatory process that presupposes the beneficiaries' active involvement in the fight against poverty. Through this approach, microcredit beneficiaries can influence the policies that are supposed to affect their living conditions. In this way, they become active players in the improvement of their living conditions.

The role of microcredit in poverty reduction has received particular attention in the economic literature, which focuses on its economic impact. There is a growing interest in the economic literature on the importance of microcredit, particularly its economic development role. Microfinance's importance justifies rigorous empirical work to assess the net impact of access to microcredit on entrepreneurial behavior and household welfare. Among the work that exists, from both microeconomic and macroeconomic perspectives, a significant number is increasingly devoted to understanding the functioning of the microcredit market, its imperfections, and credit rationing. Also, recent analyses have focused on the microeconomic and macroeconomic impacts of microfinance in an integrated environment (Amendariz and Labie, 2011; Alimukhamedova, 2019). However, studies from a macroeconomic perspective are relatively more recent due to a lack of data (Imai et al., 2012; Hadj and Rejeb, 2018).

In this perspective, in January 2014, the Togolese Government launched the National Fund for Inclusive Finance(FNFI). The role of the FNFI is to strengthen the financial and operational capacities of decentralized Financial Service Providers to permanently meet the needs of local financial products expressed by individuals, communities, and agriculture micro-firms that do not have access to traditional financial services. The FNFI's overall intervention strategy is that of "faire-faire." In strict compliance with international standards, the FNFI relies on technical and financial partner institutions to develop their activities.

As of December 31, 2020, the program has benefited more than 1.7 million people with a government investment of nearly F CFA 97 billion, or more than US$178.6 million(FNFI, 2020)

The FNFI works in synergy with all actors, such as a private bank, microfinance institutions, and development partners, while remaining in line with the Government's overall vision for grassroots development and the inclusive finance sector in Togo.

The FNFI's global strategy is broken down into strategic axes, which are the central pillars around implementing the global vision. There are three (3) strategic axes:

Strategic Area 1: Promotion of a relevant offer of inclusive finance and support to the implementation of innovative and adapted products through institutional backing to partner (microfinance institutions, private banks, Public and Regional Development Banks, and others) to strengthen their capacities;

Strategic Area 2: Providing microfinance services with adapted resources in the form of lines of credit at subsidized conditions allowing the offer of products to beneficiaries at profitable conditions for them while preserving the sustainability of financial institutions;

Strategic Area 3: Support for establishing professional guarantee mechanisms: Guarantee mechanism for the benefit of microfinance services operating in high-risk areas, Facilitation fund for the use of banks to refinance MFIs.The program also aims to motivate and empower beneficiaries to adopt behaviors to improve their financial well-being - linking their behaviors to their personal goals and aspirations and their vision of a "good life" and fueling their sense of purpose. The program also aims to empower recipients by helping them develop critical skills, providing proven strategies, and sharing the experiences of many others. In addition, the program allows beneficiaries to connect their goals to their financial plans, their plans to their consumption patterns, their "propensity to plan," and decisions about their prospects.

In this paper, I focus on the effect of access to credit on a household's (micro agriculture firms) current well-being and prosperity expectation through differences across households in attitudes and skills related to financial planning and decision to consume non-durable or durable goods and their investment in profit-generating activities.

I define the current well-being as a dynamic state in which individuals can develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community. It is enhanced when individuals fulfill their personal and social goals and achieve a sense of purpose in society (Marks and Thompson, 2008).

I define the prosperity expectation as the household's ability to invest in durables, such as education, health, and real estate. The definition here is in the capabilities perspective (Sen, 1999; Kimmitt et al., 2019).

I organize the rest of the paper into five sections. Section 1 presents the literature review. In section 2, we describe the methodology and the estimation techniques. The third section presents the descriptive statistics and some characteristics of credit demand in Togo throughout the survey. Section 4 estimates the impact of household credit access on household current well-being and expectation of future prosperity, with the quantile regression, and we conclude in section 5.

II. REVIEW OF THE LITERATURE

A. Access to credit and impact on the reduction of poverty

According to the World Bank's World Development Report, 2000/2001 on Strategic Actions for Poverty Reduction, effective participation of micro and small enterprises in market activities through access to credit is an appropriate solution. Unfortunately, most developing countries' households, especially in Africa, have no access to the traditional financial system because it is still incomplete and deficient (Li et al.,1998).

The absence of appropriate formal financial services had long led the people to the informal financial sector like the Rotating Savings and Credit Associations and the usurious moneylender, with very prohibitive interest rates (Belwal et al. 2012). Since microcredit focuses primarily on the poor in developing countries, its services would undoubtedly reduce income poverty and inequality.

Studies have highlighted the positive link between high microcredit intensity and low poverty levels (Imai et al., 2012). From a macroeconomic perspective, the number of studies on microcredit's impact remains limited (Couchoro and Gbandi, 2018, Imai et al., 2012, Ahlin et al., 2010). Couchoro and Gbandi (2018), from a macroeconomic perspective, highlight the impact of microcredit on poverty in terms of human development and multidimensional poverty in the Economic Community of West African StatesCountries (ECOWAS). They show, from panel data estimations, that microcredit contributes to the decline of multidimensional poverty. Bangoura et al. (2016), based on a panel of 52 developing countries, show that microfinance improves the poor's income and reduces inequalities. Donou-Adonsou and Sylwester (2016) applied the instrumental variables approach a panel of 71 developing countries over 2002–2011. The results show that the banking system's development has helped reduce poverty in developing countries over this period, while microcredit does not impact poverty. Imai et al. (2012) examined the links between microfinance and the poverty rate, especially the Foster-Greer-Thorbecke poverty class index. Their results show that a high level of gross loan portfolios per capita of Microcredit institutions is associated with low poverty rates. Most of the studies that have dealt with the impact of microcredit are microeconomic level. Some of these studies positively impact poverty, while others show no effect or mixed results.

Furthermore, several studies have tried to establish the relationship between microfinance and poverty reduction in this case. Belwal et al. (2012) find, by using a quantitative analysis based on questionnaires and

interviews, that microfinance impact positively income and savings of women entrepreneurs in Addis-Ababa. Based on randomized controlled trials, some impact studies (Banerjee et al., 2009) have produced mixed results and skepticism about microfinance effects. Surveys in Bangladesh show that microfinance's impact on poverty is more pronounced among impoverished households than moderate poverty (Khandker, 1996).

All of these studies have attempted to understand the impact of microcredit on poverty reduction. However, they have not been able to explain the channel through which poverty reduction responds to the effects of microfinance. Moreover, poverty reduction means improved well-being. But the notion of well-being is complex, and the paper made a distinction between current well-being and future well-being. These studies did not take these complexities into account concerning poverty reduction and improvement of well-being.

B. Access to credit and the improvement of current household well-being and the future prosperity expectations

More recently, Sutter et al. (2019) and Kimmitt et al. (2019) have shown the role of small-scale income-generating activities in improving households' current well-being and future prosperity. Sutter et al. (2019) explain that the market and entrepreneurship have a solid potential to reduce poverty by ensuring households' financial security and living conditions. This approach is hedonic (current well-being), represents an incomplete picture of human development, and underestimates its multidimensional nature (Kimmitt et al., 2019). Kimmitt et al. 2019 use the capability perspective and the role of conversion factors (social, environmental, and personal) to meet the future prosperity expectations of farm households in Kenya to show that future prosperity expectations represent a eudemonic outcome for farmers. The focus is on the "prosperity of the future generation' (i.e., improving their families' future living conditions). They collected data on 166 farm households and used the Fuzzy-Set Qualitative Comparative Analysis (Ragin, 2000) to analyze requirements related to farmers' expectations of future prosperity. They found that family microenterprises improve current incomes and living conditions and increase household expectations of future prosperity.

There is a distinct analysis between the hedonic and eudemonic concepts of well-being(Keyes et al., 2002; Kopperud et Vittersø, 2008; Berridge et Kringelbach, 2011; Huta, 2013; Hutaand Waterman, 2013; Huta, 2016; Oishi et al., 2013; Ryan et al., 2001; Bauer et al., 2015; Proctor and Linley, 2014; Uchida et al., 2014).

Proponents of the hedonic approach argue that better human living conditions are characterized by need satisfaction and the absence of satisfaction (Kahneman, 1999; Tännsjö, 2007, Diener, 1984; Feldman, 2004; Diener et al., 2009). In contrast, proponents of eudemonic approaches believe that a better life condition is not just about feelings of present satisfaction but also prospects for future satisfactions (Tatarkiewicz, 1976; Ryff, 1989; Waterman, 1993; Ryan and Deci, 2001; Deci and Ryan, 2008; Keyes and Annas, 2009; Vittersø, 2013).

Following Huta (2016), I assume that the hedonic and the eudemonic concepts are complementary and think that current well-being and the hope for future prosperity require improving the households' financial capability and autonomous financial capital. In particular, I assume that it is the formation of profit and its reinvestment in durable goods (improving the capacity of households for business management, children education, health, and housing) that ensures future generations' prosperity. Thus, financing the wealth of the future generation involves the efficiency of microenterprises and their ability to plan and generate profit for reinvestment.

Providing credit to the poor serves a dual purpose. As borrowed capital is invested in a small enterprise, it often results in significant short-term household expenditure and welfare increases. The second goal of microenterprise credit programs is to spur economic growth in the small business sector through fostering increased capitalization of the business, employment creation, and long-term income growth - (Sutter et al., 2019).

III. THE THEORETICAL MODEL

Two hypotheses support the proposed model. Following Graham and Oswald (2006, 2010), I propose a model of the production structure and consumption patterns of an agriculture entrepreneurial household that explains, on the one hand, the relationship between access to credit (which I consider hedonic financial capital) and microenterprise development. On the other hand, I think the relationship between profit (the future capital expected from the initial investment or profit, which I call eudemonic financial capital) and well-being (current well-being and the expectation of future prosperity). I define current well-being as hedonic well-being and the expectation of future prosperity as eudemonic well-being.

Hypothesis 1. The hedonic financial capital of households. We assume, in the modeling, that hedonic financial capital (credit) is a stock variable and is obtained as a result of a request by households to microcredit institutions or banks. Credit availability is a function of the agriculture entrepreneurial household's membership in a cooperative association to benefit from the public incentive mechanism for access to credit. We assume that access to credit allows agricultural families to finance productive and income-generating activities. Following Stiglitz and Weiss, 1992; Greenwald and Stiglitz, 1993, we believe that credit markets are imperfect, and we presume that microenterprises satisfy the following resource constraint:

$$c_j(t)Q_j(t) \leq CD_j(t) \qquad (1)$$

where $c_j(t)Q_j(t)$ are the total production costs, and $CD_j(t)$ what is the credit demand by the households business firms? Firms have limited borrowing capacity: the ability to not belong to a group of networks.

Hypothesis 2. The eudemonic financial capital. We assume that the eudemonic financial capital of entrepreneurial households is the difference between revenue from the sale of the goods produced and the total cost of production and, i.e., the profit. Given their investment capacity, small business owners calculate their average productivity and unit costs of production. The small business owners set the selling price of their output by applying a margin on the production cost according to their market share dynamics. The price and demand for the goods produced is the crucial element in the efficiency of microentrepreneurial households. At the end of each period, agriculture micro-firms determine their profits (Π_j), the eudemonic financial capital, or the expected future income from the initial investment, so that I have:

$$\Pi^e{}_j(t) = S_j(t) - PC_j(t) - rCD_j(t) \quad (2)$$

Where $S_j(t)$ is the expected revenue from sales of goods produced, $PC_j(t)$ the anticipated cost of production, r the interest rate, and CD_j the credit stock of microentrepreneurial households?

Hypothesis 3. The well-being of entrepreneurial households. We assume that entrepreneurial households derive maximum satisfaction from the acquisition of durable and non-durable goods. Consequently, the feeling of well-being of the agriculture micro-firm increases concerning credit access and the improvement of expected income(profit), part of which can be used to increase current income allocated to current consumption (hedonic well-being) and the other part to reinvest in the improvement of future well-being (eudemonic well-being).

The welfare of entrepreneurial households increased according to the current expenditure on durable and non-durable goods $\left(Y^*_{j,t}\right)$ and is positively dependent on credit access(CD_j,(hedonic financial capital), controlling other characteristics of the micro agricultural firm $X_{j,t}$:

$$Y^*_{j,t} = f\left(CD_{j,t}, X_{j,t}\right), \text{ with } \frac{\delta Y^*_{j,t}}{\delta CD_{j,t}} > 0 \quad (3)$$

In practice, a micro firm ceases to be economically viable when the discounted sum of its anticipated income flows falls below its costs. Of course, the calculation is by nature uncertain. But once non-viability is established, the company cannot see its needs financed except at a loss. In the case of micro-enterprises that often have access to microfinance, it is usually found that repayment rates are very high (Rosman and Zahari, 2021). In addition, repayments lead to new loans with higher amounts. In practice, loan repayments and new applications mean that microenterprises are generating profits and are therefore viable. I assume that the viability of microenterprises, i.e., their ability to generate profit, is a condition for access to credit. In practice, as Graziani (1985) does, I assume that a constant production level requires continuous financing. In practice, all products must be accompanied by credit issuance, which applies equally to firms in the capital and consumer goods sectors (Keynes, 1973). In effect, Keynes (1973) states that "planned investment - that is, ex-ante investment - may have to make its 'financial provision' before the corresponding saving has taken place. This is mainly achieved through the provision of loans by commercial banks. I assume in this paper that credit is a function of expected profit. The credit function of the microfilm is therefore determined as follows:

$$CD_{j,t} = f\left(\Pi^e{}_{j,t}, X_{j,t}\right) (4)$$

IV. ECONOMETRIC MODELS AND METHODOLOGY

A. The instrumental variable quantile regression

The starting point is to use two types of estimation techniques to evaluate the impact of credit access on the household agricultural business by improving their business profit and living standards. In the second step, we use the instrumental variable quantile regression to improve our result by considering the endogeneity bias. To this end, we use the instrumental variable approach proposed by Chernozhukov and Hansen (2004, 2005,2008).

We assume that the credit impact differs according to household income's conditional distribution, current well-being, and future prosperity expectations. Thus, we adopt a quantile regression (Koenker and Bassett, 1978). The model is specified as follows:

$$\begin{aligned} Y^* = \beta_0 + \beta_1 \quad & (Creditaccess) + \beta_2 age \\ & + \beta_3 agesquare \\ & + \beta_4 Household\ size \\ & + \beta_5 Household\ size\ square \\ & + \beta_6 Household\ marital\ status \\ & + \beta_7 education \\ & + \beta_8 Household\ gender \\ & + \beta_9 Rural + \mu_i (5) \end{aligned}$$

The dependent variable is the natural logarithm of expenditure per capita of households, including non-durable goods (foods and other current essential needs) and durable goods expenditure (education, health, asset, and reinvestment in business activities) for 12 months. The explanatory variable of interest is household access to credit.

Following model (3), I use the profit of micro agricultural firm as an instrument so that I have:

$$Creditaccess_{it} = c_0 + c_1 \log Hbprofit + \varepsilon_{it} \quad (6)$$

This equation justifies the importance of expected profits as a determinant of the viability of agricultural microenterprises and therefore access to credit for microenterprises.

V. DATA AND DESCRIPTIVE ANALYSES

We use the Harmonized Household Living Conditions Survey (EHCVM) data, collected by the National Institute of Statistics Economic and Demographic Studies (INSEED) in 2019. The EHCVM survey covered all the Togo regions and was conducted in rural and urban areas using a sample of 27 480 individuals and 6 171 households. The survey also analyzed monetary poverty, poverty based on most households' living conditions, and potential poverty while establishing a correlation.

Table 1 shows the descriptive statistics of variables used in the empirical analysis. According to the data, the average age of household heads is about 44 years. Revenues generated by households with agricultural enterprises are estimated at an average of 90,954 FCFA[1], while the production costs estimate is about 24,000 FCFA on average. Households owning agricultural enterprises make profits to divide between present consumption and investments to ensure their future prosperity. The statistics in the table also show that these households own assets such as land and belong to networks that allow them to cover risks to access credit from microfinance institutions collectively according to the public incentives mechanism. The descriptive statistics are summarized in Table 2.

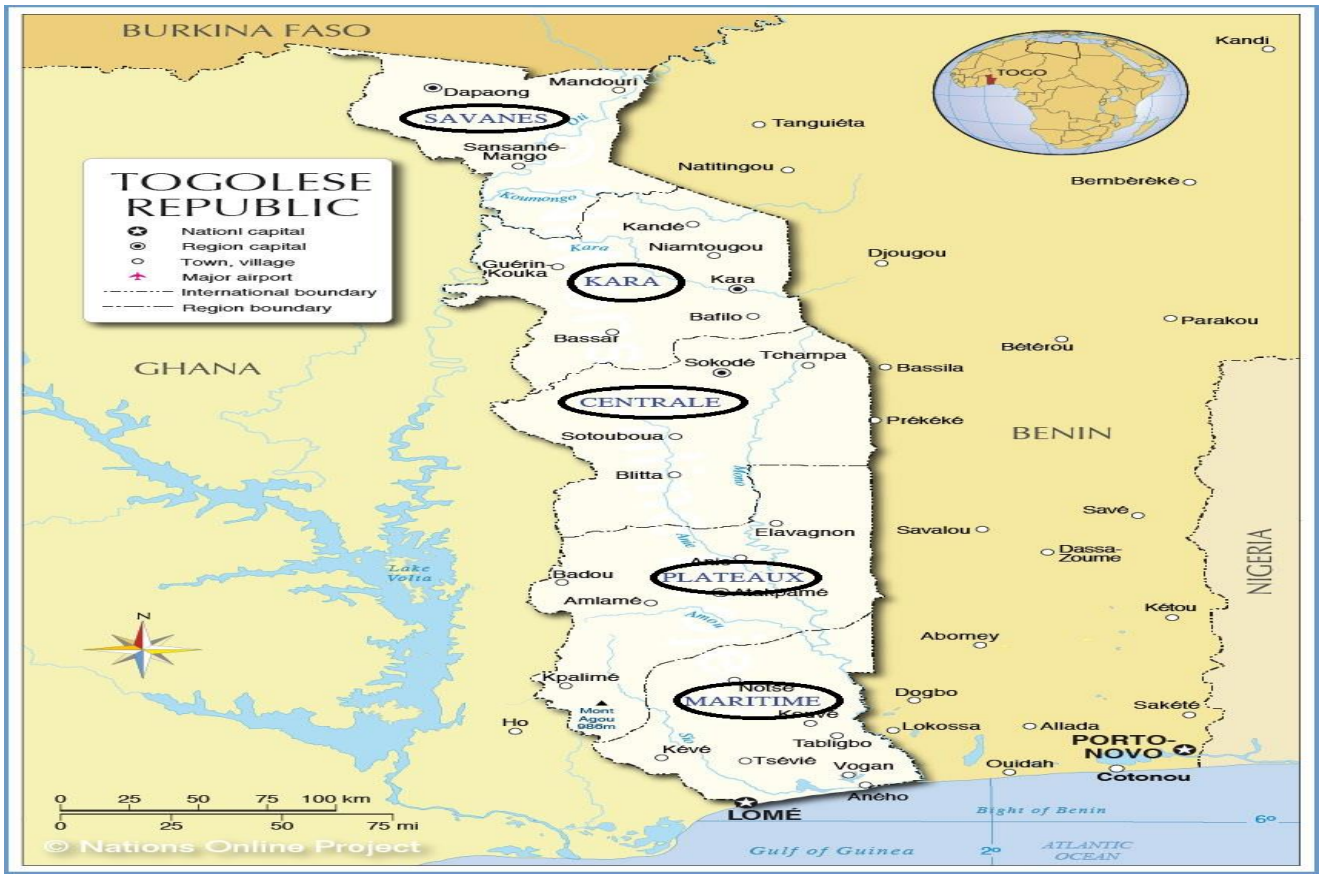

Figure 1. Map of Togo Showing the Five regions.

Online Project (http://www.nationsonline.org/). own depiction for the five regions (see also, Sodokin, 2021, Sodokin and Nyatefe, 2021)

[1] FCFA is a local currency

A. Estimation and results

I start from the argument that if credits as hedonic financial capital allow households to finance income-generating activities and, then, profit (Keynes,1971; Bailly, 1994; Setterfield and Kim, 2016; De Loecker et al., 2020; Rivera-Padilla, 2020; Konedo and Keller, 2017), they will plan and diversify its use to significantly impact their expected prosperity.

a) Checking the interdependence between credit access, the total household business profit, and household total spending.

I seek to check the interdependent relationship between household small business profits and expenditures as a first step. I use the empirical structural model based on Stock and Watson's (2007) study, which is given as follows:

$$Y^* = \alpha' + \gamma' C + \beta' Hbprofit + \theta' X + \mu \quad (7)$$

$$Hbprofit = \propto + \beta C + \gamma Y^* + \theta X + \mu (8)$$

Where $Hbprofit$ is the logarithm of households business profit or eudemonic financial capital and Y^* The total consumption expenditure of households in the agricultural sector, C denotes credit access(microfinance and banks credit access or hedonic financial capital), X represents a vector of independent variables. I have estimated equations 7 and 8 with the method of three-stage regression for systems of simultaneous equations. The results are in the following table(Table3).

The results show that access to credit or hedonic financial capital(without distinguishing between bank credits and credits from microfinance institutions) is positively related to household business profit or eudemonic financial capital and spending. The results are statistically significant(Table 3). I find, through the results, that the household credits accessor hedonic financial capital from microfinance institutions have a positive and significant relationship with the profit or the eudemonic financial capital of the small household business. In contrast, the relationship between bank credits and profits is not significant with a negative sign. This result is not so surprising, given that, in practice, small enterprises make much more use of loans from microfinance institutions than from banks. The greater ease of access to credit from microfinance institutions based on social guarantees or social capital (belonging to a social group) and access to public incentive mechanisms rather than an expensive warranty explains this proximity between microenterprises and microfinance institutions. Transaction costs would therefore be higher for microenterprises on bank loans than on loans from microfinance institutions. (Kent and Dacin, 2013; Sutter et al., 2018; Kimmitt et al., 2019).

I then use the Breusch-Pagan LM Diagonal Covariance Matrix Test to check the possible existence of a contemporaneous correlation between the two equations (the log of the agricultural micro firm profit or eudemonic financial capital and the household's total expenditures). The result in Table 4fails to reject the null hypothesis and shows no direct correlation between the total household business profit and their total spending. These results confirm the form of models 5 and 6 proposed in section 4.

b) Instrument's choice and test of the validity

As I said in the method section, I tested whether the instrument is uncorrelated with the outcome variables, a condition for valid instruments. Table 5 below shows that the selected instrument is accurate, with high explanatory power. The results clearly show that the instrument (expected household business profit) is a good explanatory variable for the endogenous variable of access to credit and microcredit as they are all statistically significant. Furthermore, as expected, the instruments do not have a statistically significant effect on the outcome variable of household expenditures. This result confirms the one obtained in table 4.

c) Instrumental variable regression results

To assess the potential heterogeneous effects, I turn to the distributional analysis. For this purpose, I proceeded to the quantile regression by comparing the distribution of the results following the Quantile Regression by Instrumental Model. The results are summarized in Tables 6 and 7.

I first proceeded with the regression by instrumental variables by taking the logarithm of household business expected profit (eudemonic financial capital) as the instrumental variable. The results show that households' access to credit (without distinction between bank credit and microcredit) positively and significantly impact the expenses related to households' current well-being and their expectations of future prosperity. However, as noted above, the weight of spending on durable goods(eudemonic well-being) is higher(13.07 for quantile 0.75 and 11.52 for quantile 0.95) than that of expenditures on non-durable goods or hedonic well-being in quantile 0.75 (3.88) and quantile 0.95 (5.47)(Table 6).

I, secondly, proceeded with the same exercise as above, using microcredit as the household source of access to credit (7). The results show that access to microfinance is positively and significantly related to household non-durables goods expenditures across all income quantiles. This result means that income-generating activities through access to microfinance improve current household well-being. However, there is a substitution effect in the 0.5 (0.27% of income spent on non-durable goods) and 0.75 (6.55% of income spent on non-durable goods) quantiles concerning the impact of microcredit on household spending on durable goods. In the 0.95 quantiles, the effect of access to microcredit is positive and significant on household spending on durable goods. This last result means that access to microcredit improves investment in durable goods much more significantly in the highest quantile.

B. Discussion of the results

I assume that the process of financing household production micro activities is complete thanks to the role played downstream, mainly by credit access (the hedonic financial capital). In this way, microfinance institutions are

unique. Microfinancegives impetus to household economic microstructures' production process. I address two issues in this perspective. The first is to address the difficulties of using aggregated data to identify microcredit's critical role in household production growth. The second is that recent developments suggest that households' hedonic well-being is disconnected from their eudemonic well-being (Kimmit et al., 2019). I agree that changing conversion factors and current evaluative representations of possible future states drive today's entrepreneurial actions. Therefore, the hope of future prosperity goes to today's entrepreneurial activity. The results of this paper s show robustly that entrepreneurial action is motivated both by the eudemonic well-being and the opportunity of hedonic well-being. I argue first that the credit channel as a whole and, more specifically, microcredit plays an important endogenous role in realizing a profit (eudemonic financial capital) on household income-generating small businesses. However, access to credit without distinction between microcredit and bank credit has a much more evident impact on improving current and future household welfare. Secondly, I argue that the hedonic financial via the eudemonic financial capital (expected income) made from small household businesses allow them to ensure their hedonic well-being and the financing of the factors of capacity that can contribute to their eudemonic well-being. Finally, our results show that in the search for a measure of household well-being, the hedonic (Kahneman, Diener, Schwarz, 1999) and eudemonic (Huta, 2015b) approaches are complementary.

VI. CONCLUSION

Our focus has been on the impact of access to credit(hedonic financial capital) on households' current well-being and future prosperity expectations in Togo. Although the conventional credit market exists, most households apply for credit from microfinance institutions to finance their small business. These households are generally those that are excluded from the traditional credit market. This paper has a twofold contribution to make to the prospects for financing economic development and welfare improvement. First, today, there is a well-recognized view that microfinance institutions' credit operations in developing countries lead to income generation.

Popular financial microstructures finance the productive activities of small businesses. The credits distributed by these financial microstructures are intended to fund the economic agents' consumption expenses who benefit from them (Sodokin,2007, Ofeimun et al.,2018). Therefore, a large part of the credit granted by microfinance institutions (hedonic financial capital) is intended to fund expenditures that can generate profits (eudemonic financial capital). The proof of this is, among other things, that the loans are very often repaid and that new jobs are created. Suppose today, when we talk about microfinance, whether by economists or actors from international organizations, we talk about poverty reduction. In that case, it is mainly because these credits are designed to fund productive and income-generating expenses. It is only if the income of economic agents increases that their well-being can improve.

In some cases, microfinance institutions and providing credit to microentrepreneurs also provide them with training in the proper management of their businesses. The aim is to ensure the development of the entrepreneurs' activity through reasonable control of the income generated. In this perspective, profit reinvestment in improving current well-being and financing skills to enhance future well-being takes on its whole meaning.

First, this analysis shows that hedonic capital is not given and comes from the demand for credit by entrepreneurial households. Second, the paper shows that hedonic capital allows entrepreneurial households to produce eudemonic financial capital. Eudemonic financial capital enables households to finance both hedonic welfare (current well-being) and long-term well-being (eudemonic well-being).

The results suggest that microenterprise support programs and public incentive mechanisms that focus primarily on improving the incomes of entrepreneurial households (e.g., through credit in general and microcredit in particular) have a significant impact on households' current and future well-being. In this perspective, a program of a national fund for inclusive finance (FNFI) launched in 2014 by the Togolese Government, whose objective is to facilitate access to financing for small economic activities for poor households, is relevant. Training and capacity-building projects for beneficiaries accompany the program. Also, support to provide various types of insurance services (health, children's schooling) are implemented within this program's framework. While considering household capacities, the programs' structuring and design are essential to compatible with Sen's work (1999). The results show that the credit channel remains an essential prospect for household welfare through microenterprise if the finance programs are socially well structured with government support.

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Table 1. Construction of variable related to household's credit (hedonic financial capital) status

	Credit		***Demand for Credit***		***Borrowing***	
Modalities	Yes	No	Yes	No	Yes	No
Rural	273	3,62	403	3,49	273	3490
Urban	171	2,089	227	2,033	171	2,033
Total	**444**	**5709**	**630**	**5,523**	**444**	**5,523**
MFI	282	5871				
Bank	52	6,101				
Total	***444***	***5,709***	***630***	***5,523***	***444***	***5,523***
Female	117	1,516	164	1,469	117	1,469
Male	327	4,193	466	4,054	327	4,054
Total	***444***	***5,709***	***630***	***5,523***	***444***	***5,523***

Source: Author compilation from Togo EHCVM (2019)

Table 2. Descriptive statistics

		(1)	*(2)*	*(3)*	*(4)*	*(5)*
Variables	***Description***	***N***	***Mean***	***Sd***	***Min***	***Max***
Household Size	The number of household members.	5,806	4.430	2.719	1	31
Household Age	Age of the household head: Number of years from the birth to the date of the survey	5,806	44.39	14.91	15	105
Log of per capita expenditure	Natural logarithm of total consumption per number of households members in FCFA	5,806	12.68	0.776	10.17	15.96
Log of food per capita expenditure	Natural logarithm of total food consumption per number of households members in FCFA	5,806	11.97	0.754	8.964	15.14
Log of non-food per capita expenditure	Natural logarithm of total non-food consumption per number of households members in FCFA	5,806	11.91	0.906	8.985	15.81
Primary education	Take value 1 if the household head has a primary level of education and 0 otherwise	5,806	0.252	0.434	0	1
Secondary education	Take value 1 if the household head has a secondary level of education and 0 otherwise	5,806	0.316	0.465	0	1
University education	Take value 1 if the household head has a high level of education and 0 otherwise	5,806	0.0539	0.226	0	1
Age square	The square of the household number of years from birth to the date of the survey	5,806	2,193	1,476	225	11,025
Maritime	Households residence region (Lome, maritime, plateau, central kara, savane)*	5,806	0.153	0.360	0	1
Lome		5,806	0.165	0.371	0	1
Plateau		5,806	0.180	0.384	0	1
Central		5,806	0.133	0.339	0	1
Kara		5,806	0.184	0.387	0	1
Rural	Takes value 1 if the household lives in a rural area and 0 if in a town	5,806	0.634	0.482	0	1
Gender (Woman=1)	Biological Sex of the household Head. Binary variable taking 1 if the household head is a woman and 0 if a man.	5,806	0.264	0.441	0	1
Credit	Dependent variable. Take value 1 if the household has access to credit from bank/IMF or the two and 0 otherwise	5,806	0.0697	0.254	0	1
Revenues	Amount of sales in the agricultural sector of products by households in CFA francs	3,331	90953.21	169432.9	0	2458800
Production costs	Total value of production factors in agricultural sector in CFAF	3,003	23712.35	35399.97	15	675000

Source: authors; Note; *Details in Figure 1

Table 3. The interdependent relationship between hedonic financial capital (credit) and household eudemonic capital(Profit) and their expenditures (3SLSregression)

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Variables	***Log of Household Total Expenditures***	***Log of Household business Profit***	***Log of Household Total Expenditures***	***Log of Household business Profit***	***Log of Household Total Expenditures***	***Log of Household business Profit***
Total Credit or hedonic financial capital(without distinction between Bank credit and MicroCredit)	0.231***	0.388**				
	(0.0739)	(0.171)				
Rural	-0.0491	0.0561	-0.0528	0.0497	-0.0490	0.0581
	(0.0360)	(0.0832)	(0.0360)	(0.0832)	(0.0361)	(0.0833)
Household gender (Man=1)	-0.0405	-0.0772	-0.0387	-0.0739	-0.0420	-0.0727
	(0.0490)	(0.113)	(0.0490)	(0.113)	(0.0492)	(0.113)
Household marital status	-0.0153	0.0219	-0.0159	0.0209	-0.0150	0.0237
	(0.0147)	(0.0340)	(0.0147)	(0.0340)	(0.0147)	(0.0340)
Education	0.140***	-0.0286	0.140***	-0.0283	0.140***	-0.0280
	(0.00873)	(0.0202)	(0.00873)	(0.0202)	(0.00876)	(0.0202)
Age	0.0299***	2.70e-05	0.0301***	0.000408	0.0296***	0.000777
	(0.00630)	(0.0146)	(0.00630)	(0.0146)	(0.00633)	(0.0146)
Age square	-0.000240***	-9.51e-06	-0.000243***	-1.46e-05	-0.000236***	-1.54e-05
	(6.25e-05)	(0.000145)	(6.25e-05)	(0.000145)	(6.28e-05)	(0.000145)
Household size	-0.273***	0.0256	-0.274***	0.0252	-0.275***	0.0201
	(0.0169)	(0.0391)	(0.0169)	(0.0391)	(0.0170)	(0.0391)
Household size square	0.0129***	-0.00104	0.0129***	-0.00102	0.0130***	-0.000759
	(0.00123)	(0.00284)	(0.00123)	(0.00284)	(0.00123)	(0.00284)
Credit from Microfinance			0.279***	0.490**		
			(0.0858)	(0.198)		
Credit from Bank					0.312	-0.702
					(0.230)	(0.531)
Constant	12.44***	10.59***	12.44***	10.59***	12.46***	10.60***
	(0.162)	(0.375)	(0.162)	(0.374)	(0.163)	(0.375)
Observations	1,266	1,266	1,266	1,266	1,266	1,266
R-squared	0.387	0.008	0.387	0.009	0.383	0.005

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

Table 4. Test of independence between household's small business expected profit or eudemonic financial capital and total expenditures

Breusch-Pagan LM Diagonal Covariance Matrix Test (3sls)
Ho: Diagonal Disturbance Covariance Matrix (Independent Equations)
Ho: Run OLS - Ha: Run 3SLS
Lagrange Multiplier Test = 0.21298
Degrees of Freedom = 1.0
P-Value > Chi2(1) = 0.64444

Table 5. Instrument validity tests (Instrument is Logarithm of Household Business Profit)

	(1)	***(2)***	***(3)***
	OLS	***OLS***	***OLS***
Variables	***The logarithm of Household Business Profit (Instrument)***	***The logarithm of Household Business Profit (Instrument)***	***Total Expenditures per capita***
Access to Credit	0.381**		
	(0.149)		
Access to Microfinance		0.492***	
		(0.175)	
The logarithm of Household Business Profit (Instrument)			-0.0125
			(0.0150)
Constant	10.57***	10.57***	12.82***
	(0.0408)	(0.0404)	(0.160)
Observations	1,266	1,266	1,266
R-squared	0.004	0.005	0.001

Robust standard errors in parentheses

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

Table 6. Instrumental Variable quantile regression: Impact of Credit access on household's Expenditures(Instrument is the logarithm of profit)

Standard errors in parentheses	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
Standard errors in parentheses	*** p<0.01, ** p<0.05, * p<0.1								
	Total Expenditures per capita	***Total Expenditures per capita***	***Total Expenditures per capita***	***Non-durable goods expenditures per capita***	***Non-durable goods expenditures per capita***	***Non-durable goods expenditures per capita***	***Durable goods expenditures per capita***	***Durable goods expenditures per capita***	***Durable goods expenditures per capita***
Variables	***0.5***	***0.75***	***0.95***	***0.5***	***0.75***	***0.95***	***0.5***	***0.75***	***0.95***
Total credit without distinction between Bank Credit and Microcredit	4.689***	5.211***	2.859***	11.55***	3.885***	5.471***	9.663***	13.07***	11.52***
	(0.0300)	(0.0326)	(0.0216)	(0.0675)	(0.0263)	(0.0341)	(0.0575)	(0.0765)	(0.0678)
Age	-0.0733	-0.0733	-0.0733	-0.0877	-0.0877	-0.0877	-0.0293	-0.0293	-0.0293
	(0.0890)	(0.0968)	(0.0640)	(0.200)	(0.0779)	(0.101)	(0.171)	(0.227)	(0.201)
Age square	0.0253	0.0253	0.0253**	0.0254	0.0254*	0.0254	0.0329	0.0329	0.0329
	(0.0156)	(0.0170)	(0.0112)	(0.0351)	(0.0136)	(0.0177)	(0.0299)	(0.0397)	(0.0352)
Household Size	-0.000185	-0.000185	-0.000185*	-0.000199	-0.000199	-0.000199	-0.000297	-0.000297	-0.000297
	(0.000155)	(0.000168)	(0.000111)	(0.000348)	(0.000135)	(0.000176)	(0.000296)	(0.000394)	(0.000350)
Household size square	-0.263***	-0.263***	-0.263***	-0.299***	-0.299***	-0.299***	-0.226***	-0.226**	-0.226**
	(0.0418)	(0.0455)	(0.0300)	(0.0940)	(0.0366)	(0.0475)	(0.0801)	(0.107)	(0.0944)
Education	0.0132***	0.0132***	0.0132***	0.0160**	0.0160***	0.0160***	0.0105*	0.0105	0.0105
	(0.00304)	(0.00331)	(0.00218)	(0.00683)	(0.00266)	(0.00346)	(0.00582)	(0.00774)	(0.00686)
Marital status	0.146***	0.146***	0.146***	0.0964**	0.0964***	0.0964***	0.183***	0.183***	0.183***
	(0.0216)	(0.0235)	(0.0155)	(0.0486)	(0.0189)	(0.0246)	(0.0414)	(0.0551)	(0.0488)
Householdgender (Man=1)	0.0104	0.0104	0.0104	0.000411	0.000411	0.000411	0.00903	0.00903	0.00903
	(0.0364)	(0.0396)	(0.0261)	(0.0818)	(0.0318)	(0.0414)	(0.0697)	(0.0927)	(0.0822)
Rural	-0.0969	-0.0969	-0.0969	-0.0632	-0.0632	-0.0632	-0.0784	-0.0784	-0.0784
	(0.121)	(0.132)	(0.0871)	(0.273)	(0.106)	(0.138)	(0.232)	(0.309)	(0.274)
Constant	12.44***	12.44***	12.44***	11.93***	11.93***	11.93***	11.37***	11.37***	11.37***
	(0.512)	(0.557)	(0.368)	(1.151)	(0.448)	(0.582)	(0.981)	(1.305)	(1.157)
Observations	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266

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

Table 7. Instrumental Variable quantile regression: Impact of Microcredit access on household's Expenditures (Instrument is the logarithm of profit)

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
	Total Expenditures per capita	***Total Expenditures per capita***	***Total Expenditures per capita***	***Non-durable goods expenditures per capita***	***Non-durable goods expenditures per capita***	***Non-durable goods expenditures per capita***	***Durable goods expenditures per capita***	***Durable goods expenditures per capita***	***Durable goods expenditures per capita***
Variables	***0.5***	***0.75***	***0.95***	***0.5***	***0.75***	***0.95***	***0.5***	***0.75***	***0.95***
Access to microcredit	-5.031***	1.374***	4.995***	9.771***	3.293***	5.828***	-0.275***	-6.549***	2.037***
	(0.0305)	(0.0162)	(0.0281)	(0.0500)	(0.0216)	(0.0318)	(0.0183)	(0.0386)	(0.0201)
Age	0.0264*	0.0251***	0.0251*	0.0261	0.0261**	0.0261	0.0306***	0.0299	0.0306***
	(0.0159)	(0.00843)	(0.0146)	(0.0260)	(0.0112)	(0.0165)	(0.00953)	(0.0200)	(0.0105)
Age square	-0.000182	-0.000189**	-0.000189	-0.000202	-0.000202*	-0.000202	-0.000254***	-0.000241	-0.000280***
	(0.000157)	(8.36e-05)	(0.000145)	(0.000258)	(0.000111)	(0.000164)	(9.46e-05)	(0.000199)	(0.000104)
Household Size	-0.293***	-0.275***	-0.275***	-0.311***	-0.311***	-0.311***	-0.239***	-0.246***	-0.236***
	(0.0425)	(0.0226)	(0.0391)	(0.0696)	(0.0301)	(0.0443)	(0.0255)	(0.0537)	(0.0281)
Household size square	0.0150***	0.0141***	0.0141***	0.0168***	0.0168***	0.0168***	0.0109***	0.0114***	0.0108***
	(0.00309)	(0.00164)	(0.00284)	(0.00506)	(0.00219)	(0.00322)	(0.00186)	(0.00391)	(0.00204)
Education	0.143***	0.149***	0.149***	0.102***	0.102***	0.102***	0.187***	0.185***	0.183***
	(0.0220)	(0.0117)	(0.0202)	(0.0360)	(0.0156)	(0.0229)	(0.0132)	(0.0278)	(0.0145)
Marital status	0.0163	0.0107	0.0107	-0.00289	-0.00289	-0.00289	0.00196	0.00639	-4.56e-06
	(0.0370)	(0.0197)	(0.0340)	(0.0606)	(0.0262)	(0.0385)	(0.0222)	(0.0468)	(0.0244)
Householdgender (Man=1)	-0.124	-0.0860	-0.0860	-0.0528	-0.0528	-0.0528	-0.0478	-0.0580	-0.0551
	(0.123)	(0.0655)	(0.113)	(0.202)	(0.0873)	(0.128)	(0.0741)	(0.156)	(0.0814)
Rural	-0.0550	-0.0991**	-0.0991	-0.0987	-0.0987	-0.0987	-0.0782	-0.0791	-0.0742
	(0.0906)	(0.0481)	(0.0833)	(0.148)	(0.0641)	(0.0943)	(0.0544)	(0.114)	(0.0598)
Constant	12.37***	12.49***	12.49***	11.96***	11.96***	11.96***	11.29***	11.27***	11.50***
	(0.521)	(0.277)	(0.479)	(0.852)	(0.368)	(0.542)	(0.313)	(0.658)	(0.344)
Observations	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266

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