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## Youth Entrepreneurship Dynamics in Benin: Was Access to Finance the Missing Piece for Opportunistic Self-Employment?

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## YOUTH ENTREPRENEURSHIP DYNAMICS IN BENIN: WAS ACCESS TO FINANCE THE MISSING PIECE FOR OPPORTUNISTIC SELF-EMPLOYMENT?

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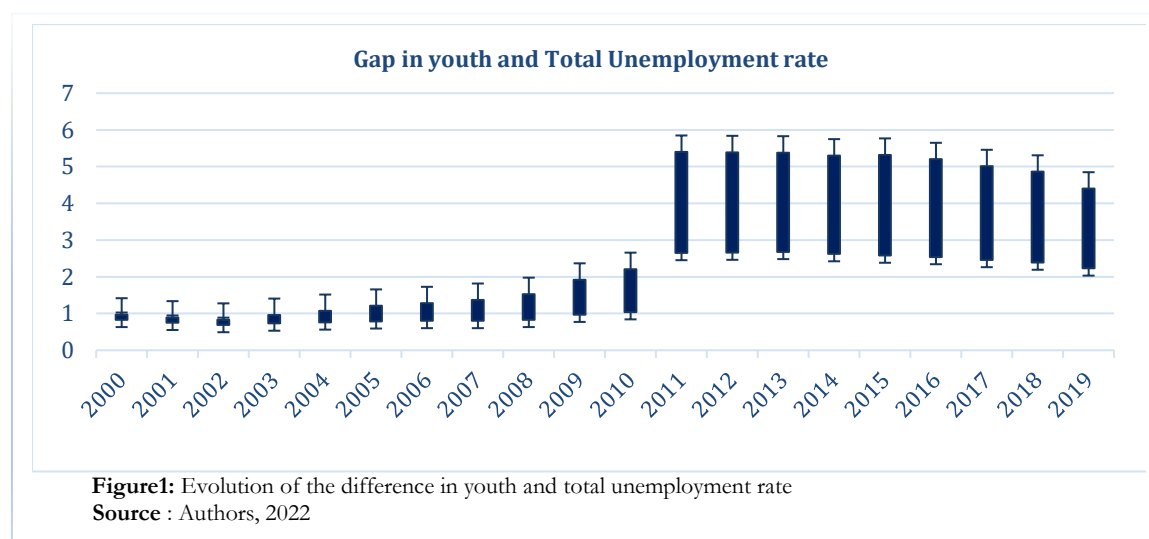
**Abstract:** Young people in developing countries and more especially in Sub-Saharan African countries are seeking employment opportunities in challenging economic and social environments. Entrepreneurship appears then as a key factor in reducing unemployment, grasping for a sustainable job and reducing poverty. Both national and international authorities are taking steps to facilitate youth entrepreneurship. In that context, this study aims at reexamining the effect of access to finance on the dynamics of entrepreneurship of young people in transition from School to work in Benin. Using a SURE Probit procedure on data from the International Labor Organization (ILO) we estimated jointly the predicted probability of entrepreneurship intention and the access to finance. Findings show that effective financial inclusion is very important for the dynamics of youth entrepreneurship in Benin but due to the nature of the youth entrepreneurship in Benin, driven essentially by necessity purpose, there is a need for policies measures towards education and particularly entrepreneurship education that are key in the effectiveness of youth financial prosperity.

**Key words:** Entrepreneurship Dynamics - Access to Finance- SURE Probit - Benin

## 1. Introduction

Over the last decades, a growing body of literature has been interested on youth entrepreneurship for various reasons. First, due to youths' bulge and potential demographic dividend, they are at first priority of all development partners that focus and orient their actions (UN, 2017; ILO, 2017). Therefore, a thriving entrepreneurial environment must be created for youths who have entrepreneurial spirit, skills, energy and ambition. Second, since many of the factors that could unlock the employment potential of youth may be on the demand side of the labor market, promoting private sector development and entrepreneurship among young people can be part of the solution to youth employment challenge and poverty alleviation (Brixiová and Kangoye, 2014; ILO, 2017; Chigunta, 2017; Senou et al., 2022). With their ability to adapt to changes and innovate, young people have the potential to drive entrepreneurship and sustained growth (Lisk and Dixon-Fyle, 2013). Finally, research on youth entrepreneurship in developing countries is still in an early stage.

Although there is not a strict definition of youth entrepreneurship, the literature concur that youth entrepreneurship is a process that can lead to developing their behavior, the skill and the entrepreneurial opportunities of the young people from school to adult age (Chigunta, 2002; Adama et al., 2017). This implies that when a youth decides to engage in a new venture, he/she develops and fully uses his/her competence individually or collectively. Most of the world's 1.2 billion young people aged 15–24 live in developing economies, where small and medium-sized enterprises (SMEs) account for 52 per cent of total employment (UN, 2017; ILO, 2017). Considering the growing number of young people entering the labor market every year, unemployment is a great threat to sustainable development and social stability. Unemployment figures understate the true extent of the challenges in the youth labor market. Benin is one of those countries where the discrepancy between youth and total unemployment rate has increased over decades (Figure 1).



Therefore, in developing countries, youth entrepreneurship is particularly sensitive because it represents a potential instrument for solving the labor market imperfection, alleviating poverty as well as ensuring food security (Metelerkamp et al., 2019). In the same vein, development agencies view entrepreneurship as an important employment generation intervention for the fast-growing young labor force in the years ahead (Alemu and Anyanwu, 2013; Adesina, 2017; Dannels and Dannels, 2019a). Youth-led enterprises can trigger significant momentum for youth-led job creation, given that start-ups account for up to 50 per cent of newly created jobs, and young entrepreneurs

primarily employ their peers (GEM, 2016). In that respect, entrepreneurial activity in developing countries like Africa is seen not only as sustainable job generation tools but as the lead route to economic development (Chigunta, 2017; Ratten and Jones 2018).

However, in the face of many challenges, youth are forced to engage in vulnerable activities such as self-employment and non-paying jobs in family business in mostly informal sector and driven by necessity (Danns and Danns, 2019a). Indeed, most of the young people are necessity driven entrepreneurs rather than opportunity driven entrepreneurs since entrepreneurship requires skills, finance as well as a very favorable business environment that addresses the multiple financial market failure faced by entrepreneurs (Acs and Varga, 2005). However, youths offer a certain potential in opportunity entrepreneurship and maximizing this potential will promote development and foster economic growth and reduce poverty. In fact, the opportunity driven entrepreneurship helps develop the instinct, ambition, energy, knowledge as well as the qualification needed to build and implement a new business idea (Robs et al., 2014).

In developing countries, and particularly in Sub-Saharan Africa, the lack of adequate start-up finance is one of the most significant barriers to young people seeking to create their own business (Herrington and Kelley, 2012), improve their self-esteem and consequently leads the necessity driven entrepreneurs to shift to opportunity driven entrepreneurship (FAO et al., 2014). Indeed, access to finance is considered to be one of the main factors hampering the creation and the growth of youth's businesses and more particularly women youth in developing countries (Duta and Banedji, 2018). Given the importance of external funding in the creation and operation of firms, researchers have examined the links between low rates of self-employment and business creation among minority groups including youths and unequal access to external funding (Storey, 2004, Muravyev et al., 2009; Aterido, et al., 2013; Pham and Talavera, 2018).

Youth entrepreneurs often have little information on the solvency of their businesses inclining banks and microfinance institutions that may refuse to lend or require them to pay a very high interest rate in order to borrow (OECD, 2017). Therefore, the expansion of low-cost financial services to youths may enable them to engage in sustainable income-generating activities and sustainable jobs that will lead to the growth and development (Santarelli and Pesciarelli, 1990; Beck, 2013; World Bank, 2018). However, a number of studies have found that the effect of access to finance on entrepreneurship is heterogeneous across entrepreneurs themselves. Indeed, the youngest, women and those living in rural areas are the least likely to engage in entrepreneurship. Focusing particularly on youth entrepreneurship in the context of Africa is relevant for the dynamics of entrepreneurship in the sense that African entrepreneurs are the youngest compared to their counterpart from the rest of the world (BAD, OCDE, PNUD, 2017).

This study contributes to the relevant literature on access to finance and youth entrepreneurship as follows. First of all, to the best of our knowledge, this is the first study in Benin that mainly focuses on youth by investigating the effect of access to finance on the dynamics of entrepreneurship. In fact, most of the previous studies focused mostly on the relationship between access to finance and entrepreneurship in other developing and developed countries (De Mel et al., 2008, Karlan and Zinman, 2009, Banerjee et al., 2015, 2017; Karaivanov and Yindok, 2018) or investigated simultaneously the entrepreneurship intention of both youth and women (Senou and Manda, 2022; OIF, 2016). Second, very few studies have assessed the entrepreneurship effect of access to finance using rigorous econometric methods (Kang and Heshmati 2008; Kairiza et al., 2016). These studies focus on the access to credit depending on whether or not they decide to engage in entrepreneurship and use different methodological approaches that suffer from many econometric issues (Kairiza et al., 2017).

In this study, we aim to fill these gaps in the literature by taking advantage of a rich national dataset containing information on thousands of young in transition to labor market. We therefore employ a Seemingly Unrelated Estimation Probit (SURE Probit) procedure that addresses the issues of endogeneity and selection bias identified emanating from observed and unobserved heterogeneity. Our findings show that access to finance is key in the intention of young people to

engage in entrepreneurship in Benin. In addition, policies targeting high growth youth entrepreneurship may provide adequate education to youths.

The rest of the article is organized as follows. Section 2 presents the overview of the Benin's business environment followed by the related literature in Section 3. Section 4 presents the methodology used in this study while Section 5 gives the results and discussion. We end the article with some concluding remarks in section 6.

## 2. Overview of the business environment in Benin

Many challenges, including weak entrepreneurial environment, limited access to finance and investment opportunities, cumbersome administrative procedures as well as obstructive taxation and legal systems are cited as obstacles to youth entrepreneurship in Benin. These challenges are confirmed by the recent World Bank's Doing Business reports that ranked poorly the business environment of Benin (Doing Business, 2020). This ranking has sparked concern among private investors and youth entrepreneurship development stakeholders. Table 1 presents the score of ease of doing business indicators including the breakdown of starting a business indicator in terms of minimum required capital, the number of procedures, and the average duration of procedures as well as the cost of setting up businesses. The procedures entail all difficulties nascent entrepreneurs including young entrepreneurs face in obtaining the requisite authorizations to start their new business.

Table1: Indicators of doing business in Benin

Indicators	Score					Rank 2020
	Benin				SSA	
	2005	2010	2015	2020	2020	
<b>Ease of doing business</b>						
Doing Business	34.96	39.65	51.4	52.4		149
<b>Starting a business indicator</b>	78.44	80.44	84.6	90.6	80.1	65
<i>Paid-in-Minimum capital (% Income per capita)</i>	333.4	290.8	6.3	5	9.3	
<i>Number of procedures</i>	10.5	10.5	7.5	5.5	7.45	
<i>Time (Number of days)</i>	34.5	34.5	12.5	8.5	21.55	
<i>Cost (% Income per capita)</i>	173.55	157.35	55.85	3.45	36.3	
Access to credit	18.75	18.75	37.5	30.0	45.2	152
Enforcing contracts for enterprises	34.64	34.64	37.73	41.5	49.6	162
Protecting minorities investors	33.33	33.33	33.33	42.0	38.5	120
Resolving insolvencies	9.95	17.92	19.5	41.0	31.3	108
Registering Property	39.35	46.46	46.61	56.3	53.6	126
Paying Tax (% overall profit)	28.26	35.01	53.77	49.3	57.8	171

Source: Authors, Doing Business, 2020

From 2013 to 2020, the ease of doing business score of Benin has improved from 34.96 to 90.6 and ranked Benin 175th and 149th out of 190 countries over the same period. Indeed, this improvement may be the result of many reforms in favor of starting a business in Benin. These reforms include the reliability and the transparency of the land administration system, the improvement of access to credit information by launching a new credit bureau, the flexibility of enforcing contracts by adopting a law that regulates all aspects of mediation as an alternative dispute resolution mechanism. In addition, the improvement of the doing business score and rank is also due to the amelioration 2005-2020 of the starting the business score. In fact, compared to Sub Saharan Africa countries that have on average 80.1 as score of starting business, Benin is ranked 65th worldwide with 90.6 as score in 2020. This is explained by the fact that Benin made starting a business easier by eliminating the need to notarize company by laws to activate a bank account after incorporation.

While most entrepreneurs cite access to credit as a major obstacle to their growth, the Doing Business statistics show an improvement in the access to credit scores over the period 2005-2020. Therefore, greater success rates are achieved when youth entrepreneurship activities are provided with access to finance in combination with training and advisory support. Indeed, with a constant score of 18.75 between 2005 and 2010, the access to credit grew substantially to 37.5 in 2015 before declining to 30 in 2020. Besides, the existence of a legal and regulatory framework is becoming favorable to doing business in developing countries like Benin. Ranked 162<sup>st</sup> out of 190, the score of enforcing contracts increased to 41.5 in 2020 after stagnating around 34.64 between 2005 and 2010. This score gives insight on the quality of the law in Benin.

However, the protection of minority investors is still a challenge in Benin. Indeed, the Doing Business's score remains constant at 33.33 over the period 2005-2015 before increasing to 42 in 2020, ranking Benin 120<sup>th</sup> out of 190 in 2020. On the other hand, in terms of insolvency settlement and registration of property rights, Benin has made a paltry ranking of 108<sup>th</sup> and 126<sup>th</sup> with a score rising from 9.95 to 41 for the settlement of insolvency and 39.35 to 56.3 for the registration of the property rights over the period 2005- 2020. Last but not the least, the taxes paid by entrepreneurs on their overall profits, is rather unfavorable in Benin. From 28.26% in 2005, the taxes ratio increased to 53.75% in 2019 before failing to 49.3 in 2020, ranking thus Benin 171<sup>st</sup> globally.

A number of initiatives have been undertaken to support entrepreneurs in general and young entrepreneurs in particular. For instance, the minimum capital has been substantially reduced from 333.33 % to 5 % of income per capita between 2005 and 2020. In addition, the procedures of setting up a business have been made less cumbersome. This has been achieved through decreasing the number of procedures from 10.5 to 5.5 between 2005 and 2020. This indicator shows therefore that although there is still lot to do, the administrative procedures for nascent entrepreneurs are becoming easier. Concerning the costs of starting it has substantially decreased from 173.55% of per capita income in 2005, to 3.45% of per capita income. Indicators also confirm the difficulty business environment in Benin. Reforms that aim significantly to reduce the time and costs of business procedures and simplify business registrations have proved effective as incentives for business registration.

### 3. Literature review

There is an important theoretical and empirical positive relationship between access to finance and entrepreneurship. Theoretically, finance is one of the business preconditions that can boost entrepreneurial effectiveness and ensure alignment of goals with the economic development of a country (Schumpeter, 1934; Santarelli and Pesciarelli, 1990).

More recent empirical literature found that access to finance is a necessary condition, not only to develop youth entrepreneurship and create jobs, but also to reduce poverty, social inequality and boost growth (Sambo, 2015; Kairiza et al., 2017, Fan and Zhang, 2017, Senou et al., 2019; Urban, 2019; Senou and Manada., 2022). Young people may have aspirations and the required skills for starting a new venture, but are disadvantaged from a credit supply-side perspective since financial institutions will perceive greater risk combined with a lack of track record and credibility (Hsu, 2004; Owen et al., 2019). Youth entrepreneurs often have little information on the solvency of their businesses inclining banks and microfinance institutions to refuse to lend or require that they pay a very high interest rate in order to borrow (OECD, 2017). In addition, those financial institutions view young people as risky; lacking credit history, work history, bank accounts and having insufficient collateral to secure loans or lines of credit (Heidrick and Nicol, 2002; UNCTAD, 2015; Sethi and Acharya, 2018).

A broad access to financial services by youths could likely lead to the development and the sustainability of their micro and small enterprises. Access to formal finance improves economic growth via value creation of small business with positive spillover effects on development

indicators such as poverty and inequality (Nanda and Kaur, 2016; Park and Mercado, 2018; Ajide, 2019). Using panel data of 13 selected African countries, Ajide (2019) finds that access to finance has positive and significant effect on entrepreneurship. In addition, an effective financial inclusion policy can reduce the financial obstacle normally faced by nascent entrepreneurs including the youth. In the same vein, Leah (2018), using Thailand households panel data, concludes that access to credit increases household entrepreneurship and income in given income categories. Fan and Zhang (2017) tested the impact of access to finance on entrepreneurship in China's industrial sector over the period 2005-2014. With multidimensional indices of financial inclusion, they took a look at 19 Chinese industries and find that strong access to finance leads to strong entrepreneurship. Regarding firm's growth, Fowowe (2017) investigated the effect of access to credit on the growth of 10888 firms in 30 African countries finds that firms that are not financially constrained are growing faster than those that are.

However, the essential of the literature that typically focuses on youth entrepreneurship and access to finance nexus in sub-Saharan African countries is scanty. The existing few evidences show that attitude towards self-employment varies greatly regardless of access to finance. This is because youths are more necessity than opportunity-driven entrepreneurs because they are generally motivated by external factors including unemployment or belonging to the working poor than internal factors, that is profit (Dawson and Henley, 2012; Haas, 2013; Mühlböck et al., 2017; Larsson and Thulin, 2017; Fairlie and Fossen, 2018).

The lack of adequate start-up finance is one of the most significant barriers to young people seeking to create their own business (Herrington and Kelley, 2012; Williamson, 2016). Due to their lack of resources, credibility, a substantive credit history or sufficient collateral, young people are often seen as particularly risky investments and therefore face difficulties in accessing finance. In addition, in many developing countries, young people seem to be underrepresented in formal financial market including the microcredit programs. One of the reasons is that in these countries, legislation prevents youth below the age of 18 to have access to the formal banking system. Indeed, a minimum age requirement of 18 for eligibility to enter into a legally binding contract prohibits many financial institutions from issuing loans to adolescents (Filmer and Fox, 2014; Rutten and Fanou, 2015). In addition, the explosive development of Mobile Banking and digital finance in general is improving young people's access to formal financial services as a means of strong entrepreneurship in developing countries (Gosavi, 2017). However, most of necessity driven young entrepreneurs clearly aspire to start their own activities including agricultural businesses in spite of the lack of skills, role models and access to finance (Metelerkamp et al., 2019).

In short, access to finance is considered to be one of the main factors hampering the growth of youth's businesses in developing countries (Aterido, et al., 2013; Sambo, 2015; Duta and Banedji, 2018; Pham and Talavera, 2018).

## 4. Methodology

### 4.1. Data

The data used in this study is from the 2014-2015 wave of SWTS "School-To-Work Transition". Conducted by the National Institute of Statistics and economics Analysis of Benin and supported by the International Labor Organization (ILO) and the MasterCard Foundation, the SWTS provides a high-quality dataset, which includes detailed information on youth socio demographic characteristics, access to finance, employment status including the entrepreneurship outcome as well as many other variables pertaining to the environment and the firm's characteristics at national level. Since its launch in 2012, the SWTS surveys a representative sample of youth Beninese in transition to labor market. The first wave of the survey in 2012 includes 6917 youths while the second wave that is used in this study realizes a total sample of 4305 youths. The

respondents of the SWTS are mainly educated, unemployed, employed and self-employed youths aged between 15 and 29 years old.

The entrepreneurship status is a binary variable that takes the value 1 for the self-employed youth /working in a family business without remuneration and 0 otherwise. In fact, working youths were asked the following question, “In your job/activity, are you...?” Responses could include: (1) an employee; (2) an employer (employing at least one employee); (3) an own-account worker (not employing any employee); (4) a member of a producers’ cooperative; (5) helping without pay in the business or farm of another household/family member; and (6) other. We generate the self-employment youth variable by combining the third, fourth and fifth question since the *ILO- SWTS* identifies young entrepreneur as a working youth who reported being an employer, own-account worker, or member of a producers’ cooperative.

The access to finance is a binary variable that takes the value 1 if the youth has access to formal financial services and 0 otherwise. Indeed, survey respondents were asked the following question, “What financial services do you personally use?” A working youth could report using business loans; emergency loans, consumption loans, savings, insurance, and/or remittances/money transfer services. If any type of these financial services was reported, we consider the youth as having “access to finance”. Consistent with previous studies, we also use a set of control variables that may affect the entrepreneurship outcome and the access to finance as well.

## 4.2. Estimation strategy

The objective of this study is to analyze the effect of access to finance on youth entrepreneurship in Benin. Several techniques have been used in recent studies to estimate the same. These techniques include the Linear Probability Model; Probit and bivariate Probit regressions (Ma et al, 2018; Liu et al., 2019); Heckman selection model (Aristei and Gallo, 2016; Pham and Talavera, 2018), the Propensity Score matching methods (Alemu and Adesina, 2017; Duta and Banedji 2018; Liu et al., 2019), the Endogenous Switching Regression for continuous outcome response (Liu et al., 2019).

In fact, it is assumed that young people who do not have access to finance may start and develop a business as those who do. This means that if we do not pay attention, we could wrongly assign the entrepreneurship intention only to young people with access to finance. Indeed, the decision to start a business is linked to other factors apart from the access to finance. These same factors may also influence access to finance. It can therefore raise in the analysis based on a simple univariate probit, a problem of endogeneity. Thus, we simultaneously model the entrepreneurship and the access to finance status by employing a SURE probit regression. Considering that access to finance and the entrepreneurship intention are all dichotomous variables, and referring to Maddala (1983), we specify the following models of simultaneous latent equations:

$$Entrp_i = 1\{\alpha_1 X_{1i} + \beta_1 AF_i + \varepsilon_{1i} > 0\} \quad (1a)$$

$$AF_i = 1\{\alpha_2 X_{2i} + \beta_2 Entrp_i + \varepsilon_{2i} > 0\} \quad (1b)$$

$$\text{Where } \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \end{pmatrix} \rightarrow \mathcal{N} \left[ \begin{pmatrix} 0 \\ 0 \end{pmatrix} \begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix} \right]$$

Access to finance ( $AF_i$ ) is a binary variable that takes the value 1 if the youth has access to formal financial services and 0 otherwise. Similarly, the entrepreneurship status ( $Entrp_i$ ) is a binary variable that takes the value 1 for the self-employed young or working in a family business without remuneration and 0 otherwise.  $X_1$  and  $X_2$  are matrices of variables that affect the entrepreneurship and access to finance variables. Since equations (1a) and (1b) contain endogenous regressors, we cannot use the simple probit model to obtain unbiased estimators simultaneously. For this purpose, we estimate these equations using the biprobit procedure. The biprobit addresses the problems of



unobserved heterogeneity, endogeneity and correlation. Equations (1a) and (1b) can also be directly estimated by Heckman's two-step method, but the interpretation of the estimated coefficients can be tedious (Maddala, 1983). Therefore, we decided to follow the following alternative method to estimate the reduced forms of equations (1a) and (1b).

$$Entrp_i = \pi_1 X_{1i} + \mu_{1i} \quad (2a)$$

$$AF_i = \pi_2 X_{2i} + \mu_{2i} \quad (2b)$$

We estimate equations (2a) and (2b) with the bivariate probit, specified as follows:

$$Entrp_i = \begin{cases} 1 & \text{if } Entrp_i^* > 0 \\ 0 & \text{if } Entrp_i^* < 0 \end{cases} \quad (3a)$$

$$AF_i = \begin{cases} 1 & \text{if } AF_i > 0 \\ 0 & \text{if } AF_i < 0 \end{cases} \quad (3b)$$

The covariance of the reduced form is  $cov(\mu_{1i}, \mu_{2i}) \neq 0$ . In order to verify the correlation between the dependent variables, we test the significance of Rho ( $\rho$ ), which represents the correlation between the errors of the two probit models. If  $\rho = 0$ , the estimation of each equation by the standard probit method would give the same result as the simultaneous estimate. In the case where  $\rho \neq 0$ , a simultaneous estimation by the bivariate probit procedure is required.

## 5. Results and discussion

Table 2 presents the descriptive statistics of the data used in this study. The sample of working youth entails 51.16% of women against 48.84% of men. The over representation of young women in the sample may be explained by the fact that the survey targeted nascent young entrepreneurs that include more women than men in small activities in Benin. In addition, 43.86 % of the working youths are entrepreneurs and 10.08% of them reported having access to formal finance. This low formal financial inclusion of young people may be explained by the fact that most of the nascent entrepreneurs particularly youthful entrepreneurs rely on self-finance or money from their friends or family to start their business.

**Table 2: Descriptives Statistics**

Variable	Obs	Percent (% of Yes)
Entrepreneurship	928	43.86
Access to Finance	3,872	10.08
<b>Sex</b>		
Male	4,306	48.84
Female		51.16
<b>Education</b>	1,165	
Primary and less		52.45
Secondary		41.46
University		6.09
<b>Job satisfaction</b>	927	
Very satisfied		14.99
Somewhat satisfied		56.09
Somewhat unsatisfied		24.27
Very unsatisfied		4.64
<b>Marital status</b>	4,306	
Single		64.44
Engaged		2.32
Married		30.31

Divorced		0.63
Widowed		2.30
Children	4,305	30.66
<b>Place of residence</b>	4,306	
Rural		56.87
Urban		43.13
<b>Government's financial support</b>	1528	18.36
<b>Financial situation</b>	4,305	
Easy		0.95
Rather easy		4.55
Equal to the average		33.70
Rather difficult		42.79
Very difficult		18.00
<b>Other variables</b>		
Internship	927	16.29
Student workers	2,933	17.56

**Source:** Authors, Doing Business, 2020

Moreover, the regulatory framework on collateral and enforcing contracts that would allow institutions to recover their investment is very inappropriate in Benin. These statistics confirm the findings of many studies including the one of Kew et al. (2013); Beck et al. (2014) and Danns and Danns (2019b) who found that small businesses including youth's entrepreneurship in developing countries rely on self-finance to start and grow their businesses. It worth noting that young uneducated are overrepresented in the sample. 52.45 of them achieve at most primary school while only 6.09% have completed at least one university degree. In addition, 56.87% of the surveyed working youths are from rural areas. This figure shows that job-generating activities are as much provided by rural areas as urban areas. Entrepreneurship in Benin turns out to be an entrepreneurship of necessity and small businesses mostly provided by the agricultural sector. In addition, most of the working youth find their financial situation similar to the average national and difficult that drive a priori their entrepreneurship intention and even access to finance.

Table 3 presents the results of the bivariate probit estimate. The first and third columns show the coefficients of the probability of engaging in entrepreneurship and having access to finance respectively. The second and fourth columns present the respective conditional marginal effects of the two equations. On the other hand, the rho value (0.025) is significant, indicating a positive correlation between the error term in the two equations and a double endogeneity of the models. Simultaneous estimation of equations 1a and 1b is justified.

**Table 3:** Robust SURE Probit Estimates Results

	(1)	(2)	(3)	(4)
	Entrepreneurship		Access to finance	
VARIABLES	Coefficient	Cond ME	Coefficient	Cond ME
Access to finance (Predicted Prob)	0.114*	0.0341*		
	(0.068)	(0.021)		
Entrepreneurship (Predicted Prob)			0.101	0.0160
			(0.0694)	(0.0109)
<b>Marital situation (Single)</b>				
Engaged	0.078	0.033	-0.329	-0.098
	(0.376)	(0.148)	(0.432)	(0.114)
Married	0.398	0.161	-0.369	-0.110
	(0.264)	(0.103)	(0.241)	(0.070)
Divorced	0.084	0.033	-0.066	-0.022
	(0.581)	(0.227)	(0.558)	(0.179)
Widowed	-0.078	-0.028	-0.228	0.070
	(0.354)	(0.134)	(0.353)	(0.104)
<b>Sex (Female)</b>				
Male	0.282*	0.112*	-0.101	-0.032
	(0.153)	(0.061)	(0.157)	(0.046)
Age	0.413**	-0.164**	0.019*	0.003

	(0.204)	(0.081)	(0.205)	(0.061)
Age square	(-0.008)*	-0.003*	0.001	0.0003
	(0.004)	(0.001)	(0.004)	(0.001)
<b>Education level (Primary and None)</b>				
Secondary	-0.245*	-0.099*	0.261*	0.077*
	(0.141)	(0.056)	(0.149)	(0.045)
University	-1.411***	-0.444***	0.617**	0.212*
	(0.388)	(0.083)	(0.294)	(0.119)
<b>Satisfaction with job(Satisfied)</b>				
Somewhat satisfied	-0.494***	-0.194***	-0.064	-0.018
	(0.190)	(0.073)	(0.201)	(0.066)
Somewhat unsatisfied	-0.447**	-0.175**	-0.221	-0.065
	(0.221)	(0.086)	(0.231)	(0.071)
Very unsatisfied	-0.844**	-0.31**	-1.340	-0.242***
	(0.334)	(0.126)	(0.588)	(0.068)
<b>Government's financial support (No)</b>				
	0.75	0.161	1.740	0.347
	(0.114)	(0.326)	(0.748)	(0.058)
<b>Financial situation (Easy)</b>				
Rather easy	0.141	0.008	4.985***	0.269**
	(0.811)	(0.338)	(0.378)	(0.111)
Equal to the average	0.385	0.104	4.643***	0.168***
	(0.761)	(0.308)	(0.239)	(0.040)
Rather difficult	0.574	0.176	5.131	0.317***
	(0.761)	(0.317)	(0.228)	(0.046)
Difficult	0.384	0.104	4.649	0.169***
	(0.776)	(0.316)	(0.295)	(0.052)
<b>Place of residence (Rural)</b>				
Urban	0.424***	0.173**	-0.599***	-0.179***
	(0.165)	(0.069)	(0.187)	(0.058)
<b>Other control variables</b>				
Children	0.431*	0.169*	0.279	-0.081
	(0.258)	(0.102)	(0.237)	(0.070)
Working Student	0.041	0.015	0.121	0.036
	(0.199)	(0.078)	(0.191)	(0.056)
Internship	-0.694***	-0.015***	0.462***	0.140**
	(0.177)	(0.072)	(0.165)	(0.055)
Constant	-5.277**		-6.577***	
	(2.393)		(2.346)	
Rho	0.025*		0.025*	
	(0.097)		(0.097)	
Log pseudolikelihood	-445.61		-445.61	
Wald	1247.93***		1247.93***	
Observations	4306	4306	4306	4306

Note: Standard errors in parentheses. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01

Therefore, it is likely that unobserved variables influence both the likelihood of entrepreneurship and access to finance of youths in Benin. However, in the simultaneous equations, it appears one direction effect indicating that only access to finance significantly influences entrepreneurship. Indeed, the equation of access to finance (Eq. 1a) indicates that entrepreneurship has no influence on the probability of access to finance for young people in Benin. Indeed, the access to finance by a youth increases the probability of engaging in a new venture by 3.41%. The result of this study is in line with previous studies including Sambo (2015), Kairiza et al., (2017), Fan and Zhang (2017), Anton and Bostan (2017); Leah (2018); Sethi and Acharya (2018) as well as Senou et Manda (2022) that support the positive effect of access to finance on entrepreneurship.

Our finding is also consistent with Dong-Liang et al. (2018) who found that credit constraint significantly decreases the probabilities of households to start businesses by around 3 percentage points in general. Besides, the results show that age is favorable to entrepreneurship and access to finance in Benin. This confirms the fact that in Benin, young people under 18 are not allowed access to finance without the legal authorization of their parents. This constraint can therefore hamper their ability to engage and perform in new venture. This result is consistent with GEM (2017) that reached the conclusion that as individuals grow older, they trust that they have

gathered the experience, capabilities and knowledge to start a new venture but they are less likely seeing enough opportunities (GEM, 2017).

A consideration of gender is imperative for an effective understanding of youth entrepreneurs' access to financing. Indeed, the results show a strong influence of gender on the probability to engage in entrepreneurship while insignificant on the probability of having access to finance. Indeed, compared to women, young men are more likely to engage in entrepreneurship in Benin. Being a young man increases the probability of engaging in entrepreneurship by 11.2%. This result confirms the reality of the business environment in most of developing countries as in Benin where women encounter more constraints in terms of number of procedures as well as the cost of starting a business (Doing Business, 2020). This finding is in line with the studies of Guzman and Kacperczyk (2019), Wellalage and Locke (2017); Aristei and Gallo (2016) and Kelley et al. (2013) that find that women are relatively more exposed to financial constraints than men and more discriminated against in the business creation process.

Furthermore, the traditions and cultural rules associated with the lack of property rights discriminate against women in terms of access to property and lack of freedom to really engage and perform in entrepreneurship (Anambane and Adom, 2018; GEM, 2018; Aterido et al., 2013; Dutta and Banerjee, 2018). Our findings also confirm the work of Santos et al. (2016) and Urban (2010) that report that the entrepreneurial intention of women is lower than men. For instance, women are seen as experiencing more complexity in career choices, such as entrepreneurship because of the need to balance work and family roles and tend to set up their new ventures with lower start-up capital than men.

Concerning education, the results show that youths engaging in entrepreneurship in Benin are mostly uneducated or less educated confirming the necessity nature of their entrepreneurship. In fact, having achieved secondary and university level including professional education level decrease the probability of the youth to engage in entrepreneurship by 9.9% and 44.4 % respectively. This result although counterintuitive is justified because in Benin most young people engage in entrepreneurship by necessity to survive and their businesses are mainly in agriculture and small business that do not need a high knowledge taught in school. Furthermore, most of educated young people do not accept to undertake in agriculture because they deem this sector not prestigious for their social position.

Our findings are consistent with the study of Brixiová and Kangoye (2019) that found that lower education is associated with higher rates of necessity rather than opportunity entrepreneurship. Nevertheless, Brixiová and Kangoye (2019) also find that education is very important in improving productivity in entrepreneurship (Brixiová and Kangoye, 2019; Wu and Wu, 2008). Similarly, based on a randomized control trial among university students in Tunisia, Alaref et al. (2020) found that education and more particularly entrepreneurial education is favorable to business ideas and nascent entrepreneurship. As found by Robson et al (2009), access to education and professional development can equip Africans with the skillset to identify opportunities, innovate, grow their businesses, and ultimately increase performance. For instance, tertiary education can act as a channel that makes training effective and increases entrepreneurship outcome. Entrepreneurial education is one of the most important factors to foster entrepreneurial willingness amongst the youth in particular (Sanchez, 2013; Fayolle and Gailly, 2015). On the other side, education is very important in influencing access to finance. High education level develops in the youths the ability to mount good projects that can benefit from the trust and financing of financial institutions. Indeed, having a secondary and university level improves the probability of accessing finance by 7.7% and 21.2% respectively.

The results indicated that rural young people compared to urban youths are more likely to engage in entrepreneurship but are most constrained in having access to finance. In fact, young people living in rural areas are 17.3% more likely to be entrepreneurs and 17.9% less likely to have access to finance than their urban counterparts. This result, although paradoxical, can be justified in many ways in Benin, where entrepreneurship is generally necessity driven and is based on small

rural activities. However, due to the risk pertaining to their activities as well as the lack of documentations, rural youths are mostly denied credit (Senou et al., 2019). It is also important to point out that although the financial situation that captures the youth's poverty level does not significantly affect the youth entrepreneurship, it substantially influences their probability to access to finance in Benin. In fact, poor young people are more likely to demand credit than non-poor youth and consequentially have more access to finance than the rich young people indicting a voluntary financial exclusion for non-poor youths. It should also be noted that the fact that a young people who worked while studying and those who attended an internship at the end of their studies are more likely of engaging in entrepreneurship and having access to finance. Moreover, having a child increases the probability of engaging in a new venture but is insignificant concerning the probability of having access to finance. This result is consistent with the reality in Benin where youths become more responsible and start looking for a job for the sake of taking care of his family.

## 6. Concluding remarks

The objective of this study was to investigate the effect of youth access to finance on their entrepreneurship intention in Benin. This study is part of a framework of inefficiency of the legal and regulatory framework on collate, property rights and credit history that hinder the financing of business ideas of young people in transition from school to work. Thus, using data jointly collected by the National Institute of Statistics and Economic Analysis (INSAE) and the International Labor Organization (ILO), this study highlighted the dual relationship between access to finance and youth entrepreneurship in Benin. It then shows a simultaneity in the relation, which is modelled and estimated using the Seemingly Unrelated Estimation Probit model. The results of the estimates show that access to finance is key in youth entrepreneurship.

Young people with access to financial services from formal institutions are likely to engage in entrepreneurship regardless of its necessity or opportunity driven nature. This confirms the empirical results that show that entrepreneurship in developing countries depends largely on external financing. In addition, the results of this study confirmed the gender gap in access to finance and youth entrepreneurship in Benin. They reveal that women are less likely to engage in entrepreneurship and access to finance than men because of their sociological consideration. Thus, state institutions and international organizations, in their mandate to fight against unemployment and poverty have to emphasize on the expansion of financial services to the excluded young people in order to support the entrepreneurship in developing countries like Benin. Furthermore, in the face of serious challenges in youth's access to finance for the sake of starting a business, this study suggests that banks and other financial institutions create alternative lending methodologies and provide a mixture of seed capital, start-up capital, private equity, debt and credit guarantee instruments to boost youth access to finance so that young people either in informal sector or in formal sector can have greater access to start up finance.

Micro-funding models as well as mobile based loan could also be used to improve access to finance where such small loans are then coupled with technical support and mentoring. Consistently with GEM (2018) it is also important to note that although access to finance is key in youth entrepreneurship, in the absence of adequate infrastructure, market opportunities and management skills, access to finance alone will not lead to the success of youth's businesses and promote opportunity driven entrepreneurship instead of necessity driven entrepreneurship. In addition, government must provide the education and especially financial and professional education required to the populations that would allow young people to shift from low generating income activities to high generating income activities. Entrepreneurial education appears to be far great than the financial prospects available due to the fact that unless the youth is well trained to become a successful entrepreneur along with the right training providing him with good skills, all the efforts pertaining to financial support would go in vain.

However, the study has some limitations that should be addressed in future researches. First of all, it is based on cross-sectional studies, where longitudinal studies are required to test the continuance of the relationship between access to finance and entrepreneurship behavior in the family as well as the effect of role model. In addition, the study although differentiate necessity and opportunity driven entrepreneurship did not consider this difference in the econometrics analysis and is, therefore, limited to the real motivation of youths to start a business. Youths who are pulled into entrepreneurship are likely to substantively differ from those pushed into entrepreneurship because of lack of better alternatives.

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