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# Determinants of Entrepreneurial Intent Among University Students: The Case of Marien Ngouabi University

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## Abstract

Government and policy makers in Congo-Brazzaville are faced with different social-economic problems. One of the most pressing challenges facing Congo especially in the face of economy recession is unemployment problem among the graduates. Marien NGOUABI University have introduced entrepreneurship education to promote the interest of graduates to becoming future entrepreneurs. This Research aimed to establish and explain factors that influence entrepreneurial intentions among university students in Congo brazzaville. The target is university graduates students. The data was gathered at University-enterprise partnerships department. The survey was structured and planned at a time when student's graduates were gathered in rectorat in May 2017, for seminar about self-marketing conducted by the University-enterprise partnerships department. A total of 2800 students were selected, they were graduate from different major area, aged between 20 and 35 years old. Results from logistic regression analysis showed that gender, tutor education, Field of study, parents own a business, having a job while at university, Parent's monthly income, desire for independence, living with parents together, school calendar were the key factors that influence students' entrepreneurial intention.

**Keywords:** Determinant, Entrepreneurial Intent, University Students, Marien NGOUABI University

## Introduction

Government and policy makers in Congo-Brazzaville are faced with different social-economic problems. One of the most pressing challenges facing Congo, especially in the face of economic recession is unemployment problem among the graduates. The underlying problem is that there is an increasing number of graduates from Colleges of Education, Polytechnics, and Universities that are seeking opportunities in the labour market every year. As the graduates cannot always depend on the public and private sectors in providing job opportunities, entrepreneurship is tend to be the alternative solution for their unemployment (Iro-Idoro and al, 2017).

Indeed, in CONGO it used to be that if you graduated from university, with good grades, you were guaranteed a job in your chosen field. But as more and more people go to university, this is no longer the case.

Research by Pihie and Akmaliah (2009) posited that 'there is a need for universities to enhance their teaching strategies in order to improve entrepreneurial self-efficacy and desire among students to opt for entrepreneurship as a career choice.'

The enthusiasm for entrepreneurship is obviously felt all over the world, in developed countries, but increasingly in developing countries as well. Such is the case in Congo, a country willing to put into place development policies driven by other industrial sectors than hydrocarbons.

Entrepreneurship has been given serious devotion due to its importance on economic growth, job creation, sources of innovation, and productivity (Urbano and Aparicio, 2015). Thus, developing countries like Congo encourage students to be involved in entrepreneurship. Part of the government effort to instill entrepreneurial spirit among university students is to make entrepreneurship subject compulsory to all students regardless of their field of study. According to Gree and Thurnik (2003), entrepreneurship has been recognized as one of the tools that drive the economy of a country. Turker and Selcuk (2009) pointed out that entrepreneurial activities are not only the incubator of technological innovation, but they also provide employment opportunities and increase competitiveness.

Given the role that entrepreneurship play in the economic development of a country, researchers acknowledge that students are the key population for entrepreneurial activities. A majority of these students will immediately contribute more to the economic growth after they graduate, not as salary workers but as entrepreneurs.

Therefore, it is important to know the factors that influence students' intentions to launch a new start-up or entrepreneurship effort. Thus, there is a call to conduct a research to understand the determinants of students to involve in entrepreneurship and also to contribute to the development of understanding in this area. This study can help governmental institutions, agencies, academic, entrepreneurial educators, consultants, and advisors to find the appropriate solutions to foster entrepreneurship in universities and consequently in the society. The main purpose of this study is to understand the student's entrepreneurial intention.

## **1.2 Research Questions**

What are the determinants of entrepreneurial intentions of Congolese students?

Which factors can motivate and hinder the entrepreneurial intentions among university students in Congo Brazzaville?

The following specific questions have also been addressed on the basis of the main question to explore the entrepreneurial intentions:

- 1- Do demographic factors such as age, gender, education level, and grades, work and business experience, family background affect the entrepreneurial intentions among university students?
- 2- Is there any relationship between entrepreneurial education and entrepreneurial intentions?
- 3- is there a link between perturbation of scholar calendar and entrepreneurial intentions?

## **Study Objectives**

This study aims to determine the factors that influence the "entrepreneurial intent" among Marien NGOUABI university students in Congo Brazzaville.

## **Significance of the Study**

This study would have the potential to contribute at least the following aspects. First and foremost, this study will contribute a lot to the university in order to thoroughly understand its students towards self-employment intention and take a remedy/action in creating entrepreneurial environment which stimulate students to become self-employed/entrepreneurs since universities are expected to incubate entrepreneurs rather than institutions to produce those who are waiting jobs/employment opportunities from government, non-government organizations.

Consequently, the university has to play its role in the fulfillment of the country's Millennium Development Goal (MDG).

Second, the subjects of this study will be benefited from the study by getting some insights regarding the importance of self-employment/entrepreneurship.

Many studies on entrepreneurship intention have been done in so many places such as South Africa, America, Asia, Europe, and America. However, there has never been much studies on entrepreneurship intention among the University students in central Africa, and particularly in Congo Brazzaville, therefore this study has come about to fill this particular gap.

The rest of this paper proceeds as follows:

We will first summarize the entrepreneurial intentions literature. Our hypotheses will be developed in the latter. After having presented our methodology, our results will be discussed, and suggestions for future research avenues and more appropriate public policies for youth entrepreneurship in Congo will be made.

**Originality/value:** Over the past decades, universities have been receiving an increasing demand to go beyond their role of producing science and technology to explore its knowledge potential to produce novel commercial applications. However, while there is a growing interest in ways to foster scientific, academic entrepreneurship, universities also serve as a positive environment for student entrepreneurship training, knowledge sharing, testing ideas, and learning. So far, the importance of student entrepreneurship has received far less attention than it likely deserves.

## **Literature Review and Conceptual Framework**

### **2.1 Introduction**

For a better understanding of entrepreneurial behavior, this chapter provides the *definition of Core Concepts* and some highlights of previous research on entrepreneurial intentions.

### **2.2 Definition of Core Concepts**

#### **Entrepreneurship**

Entrepreneurship has always been an interesting topic which is being discussed not only by economists and sociologists but also by psychologists. Various researches from those disciplines succeeded to enhance and develop the theories of entrepreneurship.

The literature review proves that understanding of "entrepreneurship" varies and there is no consensus between researchers in this respect.

Among the earliest scholars is Schumpeter (1934), who described entrepreneurship as a process of creative destruction. A firm that produce new product, services, or systems is innovator who made the existing practice obsolete.

Knight, Drucker, Hart, Stevenson, and Dial have defined entrepreneurship as risk-taking behavior which has been carried out for the future benefit and gaining independence and self-control (Parker, 2004). An entrepreneur is a person who undertakes and operates a new enterprise or venture and assumes some accountability for the inherent risks.

Ma and Tan (2006) defined entrepreneurship as a generator of national prosperity and competitiveness. It is a process of establishing a business organization for the provision of goods and services, the creation of jobs which contribute to economic development (Bilic et al., 2011). It is the act of opening and running a business venture for rendering services to people, creation of employment opportunities, as well as making profit.

Entrepreneurship can also be defined as a discipline, which can be learned, as it is being done in increasing quantity and quality across the globe (Kassean et al., 2015). Kew et al. (2013) stated that promoting entrepreneurship amongst young people is important in reducing unemployment in the labour market where formal employment opportunities are scarce. According to Maas and Herrington (2006), entrepreneurship is a significant component of the solution to a nation's development issues. Herrington et al. (2009) noted that given the failure of the formal and public sector to absorb the growing number of job seekers in a nation, increasing attention had focused on entrepreneurship and new firm creation and its potential for contributing to economic growth and job creation.

Early exposure to family business influence attitude towards entrepreneurship (Krueger, 1993). Krueger (1993) also suggested that students with self-employed father gain good knowledge about entrepreneurship in their early age. Drennan et al. (2005) found that those who reported a positive attitude toward family business experience agreed starting a business is both desirable and feasible.

Most of the entrepreneurs are self-motivated (Akhteruddin, 1999). The most important factors behind the self-motivation is the attachment with the environment by the family, gender, education, and others. Women entrepreneurs are motivated by husbands (50%), family members (34%), friends, and families (16%) and GO and NGOs (Rezia, 2000).

### **2.2.2 Intention**

Human beings are the best creature of almighty and thus excel themselves over other creature in certain important areas. One area certainly is their ability to think and judge phenomenon and also provide judgmental opinion by concisions and judicious thinking (Liñán, 2004). Alongside that human beings tend to differ genetically as far as their preferences are a concern. This notion certainly gives the birth of their ability to get attracted towards certain things while also distracted and demotivated by certain factors and forces (Delmar and Davidsson, 2000). This motivation and demotivation about objects, issues, feelings, beliefs, and also many other verbal and nonverbal expressions commonly referred to as an intention which may be positive or negative in both ways (Bird, 1988). Intention is an individual's specific propensity to perform an action or a series of actions. It is the result of conscious thinking that directs behavior (Parker, 2004). Bird (1998) defines intention is the state of mind directing a person's attention and action towards self-employment as opposed to organizational employment.

### **2.2.3 Entrepreneur and Entrepreneurial Intention**

The origin of the concept "Entrepreneur" lies in the 17th century in France – as an individual commissioned to undertake a particular commercial project by someone with money to invest. In its earlier stages, this usually meant an overseas trading project. Such projects were risky, both for the investor (who could lose money) and for the entrepreneur (who could lose a lot more) (Liñán, 2004 and Tkachev and Kolvereid, 1999). Although the term was used before Cantillon, it is clear that Cantillon was the first to offer a clear conception of the entrepreneurial function as a whole (in 1755). This term was introduced in the economic literature by him to identify the person who had the responsibility to a particular project (Nueno, 1995). He defined "Entrepreneur" as a person who took an active risk-bearing role in pursuing opportunity. Behaviorists' such as Max Weber (1930) and David C. McClelland (1961): tried to understand entrepreneur as a person. They mainly concentrated on creativity and intuitive characteristics of entrepreneurs (Ronstadt, 1990 and Krueger et al., 2000). Entrepreneurs not are characterized by every action they take, but by a particular set of actions aimed at the creation of new wealth with their ventures.

The universe of the entrepreneur, since its genesis, is associated with its own behavior and the factors that influence their decision making. Thus becoming worthwhile an analysis on the main conceptions and models of existing entrepreneurial intentions.

Entrepreneurial intention refers to intent to perform entrepreneurial activity. Several scholars focus on entrepreneurial intention in different perception, for example; Entrepreneurial intention as intention to start a new business (Krueger & Brazeal, 1994), the intention to own a business (Crant, 1996), or intention to be self-employed (Doughlas & Shepherd, 2002). It usually involves inner guts, ambition, and the feeling to stand on ones feet (Zain, Akram & Ghani, 2010).

Krueger (1993) defines entrepreneurial intentions as a commitment to starting a new business. This intention indicates potentiality of an entrepreneur to start business in the future.

Some scientists (Wu, 2008; Nabi, et al., 2006; Guerrero, et al., 2008) define entrepreneurial intention as a state of mind that people wish to create a new firm or a new value driver inside existing organizations.

An individual may have potential to be an entrepreneur but not make any transition into entrepreneurship unless they have such intentions (Ismail et al., 2009). Bird (1988) argues that intention is an important factor in facilitating towards new venture establishment and has a significant impact on the firms' venture success, survival, and growth. He suggested that intentional process often begins based on entrepreneur's personal needs, values, wants, habits, and beliefs. Studying on entrepreneurial intention provides valuable insights for researcher to understand entrepreneurial process and predict entrepreneurial activities in better way through identifying antecedents of entrepreneurial intention (Davidsson, 1995; Bird, 1998; Krueger et al., 2000; Peterman & Kennedy, 2003; Liñán, 2004; Kolvereid & Isaksen, 2006; Krueger, 2007; Dell, 2008; Ismail et al., 2009). Krueger (2007) stipulates that intention serves as a mediating factor between entrepreneurial action and potential exogenous influence (traits, demographics, skills, social, cultural, and financial support). They suggested that entrepreneurial intention helps in explaining the reasons on why certain individuals tend to start own business before opportunity scan or deciding type of business to involve in. They stated that entrepreneurs themselves should benefit from a better understanding of their own motives, intention affords them a chance to understand what factors drive them to make their decisions to pursue entrepreneurial career and how the venture becomes reality.

### **2.3 Theories of entrepreneurial intention**

Previous studies have contributed to the entrepreneurship literature by using intentional models in trying to explain the entrepreneurship phenomenon. One of these models is the entrepreneurial event model (SEE) in which entrepreneurial intentions depend on three elements: a) the perception of the desirability; b) the propensity to act; and c) the perception of feasibility (Shapero, 1982). Another well-recognized model is based on Ajzen's theory of planned behavior (Ajzen, 1991). According to Ajzen, intentions are explained by: a) subject's attitudes toward the behavior; b) subjective norms; and c) the subject's perception of behavioral control. Another model of intentions was developed by Bird (1988) which considers that entrepreneurial intentions are based on a combination of both personal and contextual factors. Further development of the Bird's model was made by Boyd and Vozikis (1994) to include the concept of self-efficacy taken from the social learning theory. Another model was proposed by Davidsson (1995), which suggested that entrepreneurial intentions can be influenced by: a) conviction, defined by general attitudes (change, compete, money, achievement, and autonomy) and domain attitudes (payoff, societal contribution and know-how); conviction, in turn, is related to personal variables including age, gender, education, vicarious experience, and radical change experience.

Different studies have been conducted around the models described above (see e.g. Audet, 2002); Autio, Keeley, Klofsten, and Ulfstedt, 1997; Boyd and Vozikis, 1994; Davidsson, 1995; Krueger et al., 2000; Peterman and Kennedy, 2003; Souitaris, Zerbinati, and Al-Laham, 2007). To our knowledge, few empirical evidences have been reported regarding the effect of exposing students to entrepreneurship education on the entrepreneurial intentions. Previous studies have suggested that entrepreneurship education should improve the perceived feasibility for entrepreneurship by promoting self-efficacy and perceived desirability for an entrepreneurial career (Krueger and Brazeal, 1994). One study is of Peterman and Kennedy (2003) in which it was found that exposure to enterprise education affects intention. However, the sample was taken at high school rather than at the university level. Hence, more research is needed to investigate the claims discussed above.

## 2.4 Factors influencing Entrepreneurial Intention

Factors affecting entrepreneurial intention may be internal that is personality traits or external that is the general environmental factors such as culture, political, and economic factors.

### 2.3.1 Internal factors

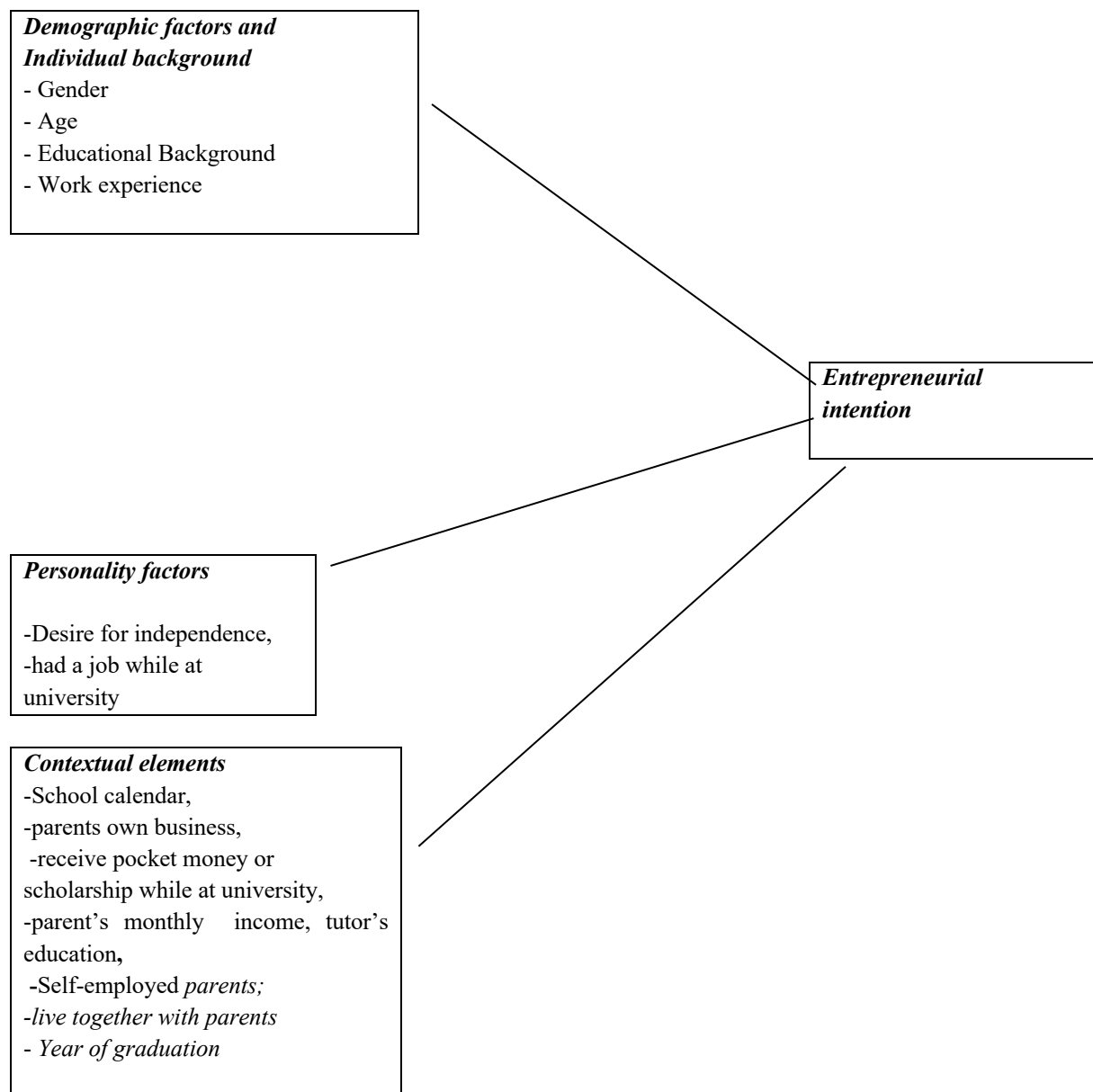
From the substantial number of previous research on entrepreneurial intention, it has been identified that three factors dominate entrepreneurial intention. One is his or her demographic profile that includes age, sex (gender), previous experience (whether they had a job while at university), and influence of role model. Second one is personality traits that include self-efficacy, confidence, autonomy (whether they received pocket money or scholarship while at university, desire for independence), locus of control, risk-taking tendency, and professional attraction. Third factor is contextual that includes education and environment (Wärneryd, 1988).

According to trait theory of entrepreneurship- entrepreneurial intentions are dictated by some particular traits. Those are: High need for achievement; which means a need to always achieve new bold goals, risk-taking propensity; which defined as a willingness to take financial risks, tolerance for ambiguity; which refers no fear of the unknown, innovation; which is an ability to create new or modify existing business concepts, intuition; which is synonymous of make decisions based on 'gut feelings', internal locus of control which is synonymous to a belief that the future is determined by their own actions and also proactiveness; which is making plans for events before they occur (Boyd and Vozikis, 1994).

### 2.3.2 External Factors Environment

According environmental approach theory-Choice of Entrepreneurship is related to external factors beyond the individual's control, seen as a cultural phenomenon, education(Entrepreneurial knowledge, field of study) and experience, family background( whether parents own business; parent's monthly income, tutor's education, Self-employed *parents*, *Whether parents live together with him*), School calendar . Adze(2018) et al. worked on some factors to identify the determinants of entrepreneurial intentions among students in the democratic republic of Congo. They investigated the effect of innovation, education, family background, and gender difference on creating intentions. They found innovativeness and family business experience are related with entrepreneurial intention. Contingency theory of entrepreneurship suggests that people do not become entrepreneur willingly rather situations or contingencies force them to become so. In such situations, they have some motivations for becoming entrepreneurs in certain situations (Shaver and Scott, 1991).

Based on some previous research, it is important to test the influence of internal and external factors in stimulating student intention at university in entrepreneurship. The framework of this research can be seen in Figure 1.

Figure 1. **Research Model**

Based on the description above, the hypothesis in this study are:

Hypothesis 1: Demographic factors and individual backgrounds, such as age, gender, education, and work experience have an influence on entrepreneurial intentions.

Hypothesis 2: students' environment is determinant factor of entrepreneurial intention.

Hypothesis 3: The perceived students' capability (personal factors) positively influences their entrepreneurial intention.

### 3. Methodology

#### Data Collection

The study on entrepreneurial intentions among Marien NGOUABI university students employs the survey conducted at Marien NGOUABI University (the only one public university) in Congo - Brazzaville, Central Africa. The data was gathered at University-enterprise partnerships department. The survey was structured and



planned at a time when student's graduates were gathered in rectorat in May 2017, for seminar about self-marketing conducted by the University-enterprise partnerships department.

The English language questionnaire was translated into French. Students were instructed on how to take the questionnaire.

**Sample selection:** Survey data were collected from university student's graduates where efforts were made not only to include students who have taken entrepreneurial courses and those who have not but also to ensure female students were represented. A total of 2800 students were selected, but, only 2548 students responded to the survey, they were graduate from different major area, aged between 20 and 35 years old. The questionnaire was pilot tested in center of research and prospective studies, and the Cronbach alpha tests were carried out to determine the reliability of the questions.

### Dependent variables

For the purpose of this study, the dependent variable is entrepreneurial intention. The entrepreneurial intention. Is further segregated into Disagree, Neutral and Agree. Of the 2548 respondents 18.58 % did not want to be entrepreneurs, 41.72% were not sure about it, 39.7% had strong entrepreneurial intentions.

### Independent variables

The choices of explanatory variables are based on the objective of study and variables that affect the student behavior on their future professional.

The following variables were considered as the explanatory/independent variables: age ,gender, field of study, whether parents own business, whether they received pocket money or scholarship while at university, whether they had a job while at university, parent's monthly income, tutor's education, Self-employed *parents*; School calendar, Desire for independence, year of graduation, Whether parents live together with him.

#### Identification

<i>Age</i>	<i>taking dummy variable, 1 if 20-35years and , 0 otherwise (35+ years= reference)</i>
<i>Gender</i>	<i>taking dummy variable, 1 if female and, 0 otherwise ( Male= reference category)</i>
<i>Field of study</i>	<i>taking dummy variable, 1 if business management course and , 0 otherwise ( other courses= reference category)</i>
<i>Whether parents own a business</i>	<i>taking dummy variables,1 if parents own a business and ,0 otherwise (parents don't own = reference category)</i>
<i>Pocket Money received in university</i>	<i>taking dummy variables,1 if received and 0 otherwise (not received = reference category )</i>
<i>Had a job while in university</i>	<i>taking dummy variables,1 if had a job and 0 otherwise (no job = reference category)</i>
<i>tutor's education</i>	<i>taking dummy variables,1 if educated and , 0 otherwise (Not educated = reference category)</i>
<i>Parent's monthly income</i>	<i>income1 = 1 if the parent's monthly income is 100000-199000 income 2 = 1 if the parent's monthly income is more 199000</i>
<i>Self-employed parents</i>	<i>taking Dummy variable with value 1 if the mother, father or both are self-employed, and value 0 if neither of the parents is self- employed (Not self-employed = reference category)</i>

School calendar	<i>taking dummy variables, 1 if calendar is respected and 0 Otherwise (not respected = reference category)</i>
Desire for independence	<i>taking dummy variables, 1 if had a desire for independence and 0 otherwise (had no desire for independence = reference category)</i>
<i>Whether parents live together with him</i>	<i>taking dummy variables, 1 if parents live together with him And, 0 otherwise (don't live together = reference category)</i>
<i>Year of graduation</i>	<i>taking dummy variable, 1 if 2017 and, 0 otherwise (2016 and before, reference category)</i>

Table 1: summary statistics of the variables under consideration total observations (n)= 2548

variables		Mean	Std dev	Min	max
Age		24680	3495	19	48
Gender	Male	0516	0500	0	1
	female	0484	0500	0	1
Field of study	Business courses	0.359	0.480	0	1
	Others courses	0641	0.480	0	1
Tutor's education	Educated	0,442	0,497	0	1
	Not educated	0,558	0,497	0	1
Self-employed parents	Self-employed	0,223	0,419	0	1
	Not self-employed	0,776	0,419	0	1
Parent's own business	yes	0144	0352	0	1
	no	0856	0352	0	1
received Pocket money	Yes	0818	0386	0	1
	no	0182	0386	0	1
Had a job while at university	yes	0092	0289	0	1
	no	0908	0289	0	1
Parent's monthly income	Below 100000	0568	0495	0	1
	100000-199000	0274	0446	0	1
	More than 200000	0159	0365	0	1
School calendar	Yes	0.654	0.476	0	1
	No	0.346	0.476	0	1
Desire for independence	Yes	0.723	0.448	0	1
	No	0.277	0.448	0	1
Whether parents live together with him	yes	0.774	0.418	0	1
	No	0.226	0.418	0	1
Year of graduation		2014,861	0,562	2006	2017

To analyze and measure the entrepreneurial intentions of students, I have adopted the Multinomial Logit Model (MNL) for empirical analysis as proposed by Hosmer, Lemeshow, and Sturdivant (2013) in their book titled «Applied Logistic Regression». In order to apply multinomial logistic regression analysis in this study, the five-point likert scores were recorded and made into a categorical dependent variables.

Starkweather and Moske (2011) also suggests the application of multinomial logistic regression when the dependent variables are categorical since the estimation does not assume normality, linearity, and homoscedasticity. They further imply that multinomial logistic regression assumes that the choices in the dependent variable is not related to each other.

Multinomial regression is taken to discuss the relationship between one nominal dependent variable and one or more independent variables. This technique offers a relaxed assumption of the linearity between the dependent

and independent variables. Having more than two categories on a single dependent variable in the model, this technique is appropriate (Fox, J. 2000.)

The mathematical functions are modelled as follows:

$$\begin{aligned} G1(x) &= \ln \frac{\Pr(Y=1/X)}{\Pr(Y=0/X)} = \beta_1 X_i \\ &= \beta_{10} + \beta_{11}X_1 + \beta_{12}X_2 + \dots + \beta_{1p}X_p \\ &= X' \beta_1 \end{aligned} \quad (1)$$

And

$$\begin{aligned} G2(x) &= \ln \frac{\Pr(Y=2/X)}{\Pr(Y=0/X)} = \beta_2 X_i \\ &= \beta_{20} + \beta_{21}X_1 + \beta_{22}X_2 + \dots + \beta_{2p}X_p \\ &= X' \beta_2 \end{aligned} \quad (2)$$

The conditional probabilities of each outcome category given the covariate vector are

$$\Pr(Y=0/X) = \frac{1}{1 + e^{g1(X)} + e^{g2(X)}}$$

$$\Pr(Y=1/X) = \frac{e^{g1(X)}}{1 + e^{g1(X)} + e^{g2(X)}}$$

$$\Pr(Y=2/X) = \frac{e^{g2(X)}}{1 + e^{g1(X)} + e^{g2(X)}}$$

The more general expression for the conditional probability in the three category model is

$$\Pr(Y=j/X) = \frac{e^{g_j(X)}}{1 + \sum_{k=0}^2 e^{g_k(X)}} \quad (3)$$

In order to ascertain the model fitting information, the following hypothesis has also been developed as a first stage analysis to confirm the empirical results:

H0: there is no difference between the model without independent variables

H1: there is a difference between the model without independent variables

The strength of the multinomial logistic regression relationship has been measured by considering the value of the pseudo R-square.

Table 3: Chi square values and pseudo R2 values

Multinomial logistic regression No of observations = 2548	
LR chi2 (28)= 164,89	
Probability >chi2 = 0.0000	
Log likelihood = -2607.82	pseudoR2 = 0.0306

While testing the null hypothesis that there is no difference between the model without independent variables and the model with the independent variables. The chi-squared values have been utilized to test the statistical significance. As evident from Table 3, the probability of the model chi-squared was 0.000, less than the

significance level of 0.01. Therefore, we reject the null hypothesis that there is no difference between the model without independent variables and the model with independent variables and accept the alternate hypothesis that there exists a relation between the independent variables and the dependent variables.

The pseudo R square value from table 3 shows that 3.06 per cent of the variability is explained by this set of variables used in the model.

Table 4: estimation results from the multinomial logit model

Total observations(n)= 2548

Variables	neutral		Agree	
	coefficient	Marginal effect	coefficient	Marginal effect
Age	0.262** (0.123)	0.036 (0.023)	0.192* (0.132)	0.002 (0.022)
female	-0.315*** (0.111)	0.005 (0.021)	-0.551*** (0.119)	-0.071*** (0.019)
Tutor's education	-0.059 (0.135)	-0.037 (0.025)	0.151 (0.143)	0.041* (0.023)
Field of study	0.293*** (0.117)	-0.014 (0.021)	0.576*** (0.123)	0.079*** (0.019)
Self-employed parents	0.032 (0.154)	0.038 (0.028)	-0.203 (0.164)	-0.048* (0.026)
Parent's own business	0.326* (0.175)	-0.026 (0.030)	0.711*** (0.178)	0.103*** (0.026)
Received pocket money	0.001* (0.137)	0.004 (0.026)	-0.024 (0.148)	-0.005 (0.024)
Had a job while at university	-0.323 (0.178)	0.006 (0.037)	0.570*** (0.201)	-0.074** (0.036)
Parent's monthly income (100000-199999)	0.022 (0.138)	0.006 (0.037)	-0.570 (0.201)	0.012 (0.024)
Parent's monthly income (more than 200000)	0.053 (0.180)	-0.005 (0.026)	0.073* (0.148)	0.058* (0.030)
School calendar	0.182* (0.114)	-0.030 (0.022)	0.503*** (0.125)	0.080***
Desire for independence	0.196* (0.131)	-0.011 (0.026)	0.394*** (0.145)	0.055** (0.024)
Whether parents live together with him	0.229* (0.137)	0.022 (0.027)	0.526*** (0.154)	0.078*** (0.026)
Year of graduation	0.031 (0.182)	0.003 (0.034)	0.030 (0.195)	0.002 (0.032)
Constant	0.212 (0.237)		0.746 (0.263)	
R squared	0.031		0.031	
Disagree	Base outcome			

Note: \*\*\*, \*\* and \* represent significant at 1%, 5% and 10% respectively.

Source: Survey data 2017

Table 4 highlights the estimate of the analysis adopted for the study as dependent variable was recoded into categorical variable. Two different estimates were generated in comparison to the base outcome. For this study, disagree was assigned as a base outcome or reference variable and estimates for the variable neutral and agree were generated in order to compare with the base outcome. However, as the variable neutral does not provide any significance, in comparison to the base outcome, only the estimates generated from the variable agree are presented in comparison with the base outcome.

Results from logistic regression analysis showed that gender, tutor education, Field of study, parents own a business, having a job while at university, Parent's monthly income, desire for independence, living with parents together, school calendar) were the key factors that influence students' entrepreneurial intention.

### **Gender and entrepreneurial intention**

The estimation results from the gender perspective on entrepreneurial intention show that females are less likely to venture into entrepreneurship, the estimates show that in comparison to male, a female is 7,1 percent less likely to become an entrepreneur which is significant at a 1 percent level of significance.

The reasons for lower female interest in entrepreneurship may relate to a number of factors, such as personal background and experience and reduced perceptions of skill and self-efficacy. Gender may relate to such factors as "need for achievement" (McClelland, 1961), confidence or over-confidence (Busenitz and Barney, 1997) and propensity to take risk (Van Praag and Cramer, 2001, Franke and Luthje, 2004). Evidence from psychology implies that females have higher risk aversion tendencies than males (Arch, 1993; Byrnes et al., 1999).

### **Effect of tutor education on entrepreneurial intention**

Likewise, tutor (father, mother, or guardian depending on who was the household head) education level was another factor with a very strong contribution to predicting graduates' entrepreneurial intention. The results were statistically highly significant at a 10 percent level of significance. In other words, a graduate whose tutor is educated is 4.1 percent more likely to become entrepreneur.

These findings confirm the findings by Van Praag (2005) who observed that parental background characteristics such as education or job level of the father and sometimes mother influence the probability of starting up a firm but not entrepreneurial performance. People are more likely to become entrepreneurs if their father was also an entrepreneur and /or if their father had a higher qualified job or a higher level of education (Van Praag, 2005).

### **Effect of Field of study and entrepreneurial intention**

In terms of academic courses undertaken while at university, the estimates indicate that a graduate who has undertaken an entrepreneurial course is 7,9 percent more likely to take up entrepreneurship as a career option which is statistically significant at a 1 percent level of significance.

Entrepreneurship intention is very much associated with entrepreneurial knowledge which begins from within the family, and this knowledge can stimulate the entrepreneurial intentions.

Similar findings were obtained by Siyanbola *et al.* (2009) who studied the determinants of entrepreneurial propensity of Nigerian undergraduates and found that entrepreneurial education, among other things influenced entrepreneurial propensity of Nigerian undergraduates. The authors further argue that entrepreneurship training and communication initiatives are key sources of positive entrepreneurial influence.

### **Effect of parents own a business on entrepreneurial intention.**

A graduate whose parent owns a business is 10,3 percent more likely to become an entrepreneur and is statistically significant at a 1per cent level of significance.

Graduates recalled the influence of business enterprise on their lives as they were growing up. They understood the value their families placed on their business and were observers and participants over the years; involved in sharing conversations and discussions; learning values, commitment, personal responsibility, accountability, hard work and understanding along with other aspects of family life.

This finding is not surprising, as it is in line with the results provided by (Bosma et al., 2012; Carr & Sequeira, 2007; Laspita et al., 2012; Oren Caduri, & Tziner, 2013), among others.

Effect of having a job while at university on entrepreneurial intention. With regard to the entrepreneurial intentions among those graduates who were already employed while pursuing their studies at the university, the estimates show that those graduates who had a job were less likely to become entrepreneurs in comparison to their counterparts which did not have a job while studying.

Graduates who had a job while studying at the university were 7,4 percent less likely to become entrepreneurs which are statistically significant at a 5 percent level of significance.

#### **Effect of Parents monthly income on entrepreneurial intention**

While measuring Parent's monthly income and the corresponding impact on their children perception towards entrepreneurship, the estimates show that as the parent's monthly income increases over 200000 a month, the probability of entrepreneurial intention exist. The estimates claim that a graduate whose parent's monthly income is more than 200000 is 5, 8 percent more likely to have entrepreneurial intention when compare to those graduates whose parent's earnings are less than 200000 a month which is statistically significant at a 10 percent level of significance.

#### **Effect of desire of independence on entrepreneurial intention**

The relationship between the desire for independence and the entrepreneurial intention was statistically significant at a 5 percent level of significance. This finding converges with the study of Douglas & Fitzsimmons, 2005 who said that, generally, individuals who possess a high need for independence would seek for careers with more freedom (Lee & Wong, 2004). Wilson et al. (2004) resolved that teenagers in Hispanic and African American who like entrepreneurship are motivated by a motivational factor such as the desire for independence. This implies that students with a strong desire for independence are likely to possess a higher level of entrepreneurial intentions.

#### **Effect of graduate for living with parents together on entrepreneurial intention**

Joint family pattern of living is a force to be reckoned with in providing a base in entrepreneurship the results from joint family encouraging to consider entrepreneurship as a career choice shows that the likelihood of a graduate to endeavor into entrepreneurship increases by 7, 8 percent if a graduate lives together with parents. The estimates have been found statistically significant at a 1 percent level of significance.

#### **Effect of School calendar on entrepreneurial intention**

Another important determinant of graduates' drive and determination is the school calendar. School calendar generally refers to the turbulence occurred this last five year due to the strike in repetition. University staff launched an indefinite strike since on unpaid wages. The findings showed that the school calendar significantly predicts graduates' drive and determination.

These strikes are used to pressure governments to pay wages and to change policies of universities infrastructural development and welfare of both Academic and non-Academic staff union of universities. Strikes are often part of a broader social movement taking the form of a campaign of civil resistance undertaken by unions during collective bargaining. Strike consists of workers refusing to attend work and picketing outside the workplace to prevent or dissuade people from working in their place or conducting business with their employer.

Irregularity of academic program, examination malpractices and cultism amongst students, certificate racketeering, and erosion of dignity motivate and hinder the entrepreneurial intentions among university

students in Congo Brazzaville. The estimates has been found statistically significant at a 1 per cent level of significance.

Estimates from variables such as age, year of graduation, whether they received pocket money or not and household income level between 100000-199000 was not found statistically significant in this analysis.

### **Conclusion**

The motivation for this study was to explore the factors that influence entrepreneurial intentions among university students in Congo Brazzaville. The finding of this study are presented through descriptive analysis as well as through econometric model. Logistic regression model was adopted for the econometric analysis. Findings from the empirical analysis show that there exist some aspect of gender differences while considering entrepreneurship as a career choice. The study claims that female graduates are less likely to become entrepreneurs as compared to male graduates. It confirm the first hypothesis. Concerning academic courses undertaken while at university, graduates who have pursued business management courses are more likely to opt entrepreneurship as a career as those graduates who have pursued other courses.

The study also finds that there is a great significance between graduates' entrepreneurial intention and their parents' owning a business. The probability of a graduate's entrepreneurial intention increases if the parent owns a business. This can be attributed to the fact that parents who are themselves involved in entrepreneurship would most likely encourage their children to venture into entrepreneurship. As entrepreneurial intention is highly associated with entrepreneurial knowledge and parents who are involved in entrepreneurship may well be the first source of that entrepreneurial knowledge. This finding confirms the presence of normative belief, which refers to the individual's belief established by perceived social pressure and subjective norms.

The study also reports that those graduates who had a job while pursuing their studies are less likely to become entrepreneurs when compared with those who did not have a job while pursuing their studies. This finding is realistic as those graduates who had a job while pursuing their studies were in-service candidates, mostly from the civil service who were upgrading their educational qualification.

Those in service graduates already had a job, were on study leave and would, therefore, resume work after completion of their studies and hence are less likely to be entrepreneurs. Parent's monthly income level were also found to be positively associated with entrepreneurial intentions. The higher a parent's monthly income, the more likely that a graduate would venture into entrepreneurship. Individuals who possess high need for independence will seek for careers with more freedom. This implies that students with a strong desire for independence are likely to possess a higher level in entrepreneurial intentions as it was mentioned in hypothesis 3. The results from parent's education level show that if a father is educated, graduates are more likely to have entrepreneurial intentions in comparison to those graduates whose fathers are not educated.

Irregularity of academic program, examination malpractices and cultism amongst students, certificate racketeering, and erosion of dignity motivate and hinder the entrepreneurial intentions among graduates students this situation confirm hypothesis 2. Congolese graduate students have high attitudes towards self-employment actually this indicates that the respondent is more in favor of self-employment than organizational employment.

### **Areas for Further Research**

Further studies should expand the study to private universities in Congo Brazzaville.

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