

Entrepreneurship, Education and Youth Employment in Africa: Reframing Higher Education

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Abstract. Given the high rate of unemployment in most countries in Sub-Saharan Africa policy makers innovate by fostering job creation and self employment through entrepreneurship education. We build on the Theory of Planned Behavior developed by Ajzen (1991) and use Probit regression to investigate the marginal impact of entrepreneurship education on entrepreneurial intent using survey data gathered in Côte d'Ivoire in 2015. We find that an ecosystem of entrepreneurship increases entrepreneurial intent by 50% while an entrepreneurship awareness course does not have any statistically significant impact. This result suggests reframing higher education in order to favor the entry into the private sector by the youth.

Keywords: Entrepreneurship · Education · Innovation · Youth employment Africa

1 Introduction

The high rate of unemployment coupled with the apparent inability of formal education to prepare youth for jobs or to train job creators (not only job seekers) raises the fundamental question of the appropriate innovation in the education system. According to the 2015 report of the International Labor Organization (ILO)¹, Africa has 226 million youth aged 14 to 35 years and an average of more than 10 millions of youth will be entering the job market every year in the coming years. In countries like Côte d'Ivoire 79% of the population is aged less than 25 years. Unfortunately, this youth is plagued with high unemployment as 75% of the unemployed are aged 14–35 years. Meanwhile, the size of public job openings for 2016 was not above ten thousand jobs by the middle of the year 2016². It is therefore obvious that governments can no longer rely only on public jobs.

¹ International Labor Organization (ILO) <http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/19/lang--en/index.htm>.

² Exactly 8321 public jobs opening by may 2016.

In a 2013 report on “Youth employment and insertion support program”³, the African Development Bank (AfDB) found that the increase in unemployment is stronger among youth who attended university than not. The aforementioned 2015 ILO report suggests that youth with tertiary education are two to three times more likely to be unemployed than those without education. Consequently, the data on unemployment and education mismatch raises security issues (Kabore (2016)) and questions the relevance of higher education in Côte d’Ivoire and in most countries in West Africa. Massaquoi et al. (2014), Sabbi et al. (2014) and Thia (1998) show that there is skills mismatch respectively in agricultural education in Sierra Leone, in self-employment skills in Ghana and in general education in Ivory Coast. The results of Sabbi et al. (2014), in particular, suggest that the Millennium Development Goals (MDG) educational objectives promote enrolment without commensurate incorporation of quality or self-employable skills teaching and learning.

Since, formal education does not meet the employment needs of students, an innovation in higher education could consist in encouraging entrepreneurship. In that regards, statistics from the European Union confirms that jobs are created more by small and medium enterprises than by large and global enterprises⁴. Building on the Theory of Planned Behavior (TPB) by Ajzen (1991), several empirical studies tried to predict the likelihood of people undertaking entrepreneurial activities. According to TPB, intentions to perform behaviors of different kinds can be predicted with high accuracy from attitudes toward the behavior, subjective norms, and perceived behavioral control; and these intentions, together with perceptions of behavioral control, account for considerable variance in actual behavior. Our study goes along the lines of Fayolle and Benoît (2013), Boissin et al. (2009), Autio (2001) and Mintzberg (2004). Autio (2001) studies the impact of entrepreneurial education among students across three continents: America (USA), Europe (Finland, UK, and Sweden) and Asia. Autio (2001) contributes to the literature by showing, in a multi-cultural environment, a weak influence of subjective norms as reflected in the perceived general acceptability of entrepreneurship as a career choice on entrepreneurial intent.

Fayolle and Benoît (2013), on the other hand, studied the impact of a short awareness compulsory program on entrepreneurial attitude for a group of 275 French students. Their results indicate that the initial level of entrepreneurial intention and prior entrepreneurial exposure are not good predictors of an entrepreneur’s behavior as modeled by the TPB. There also appears to be no observable effect on the students in the short term, even though on average, a significantly positive impact on the student’s attitudes toward entrepreneurship and perceived behavioral control in the medium term (six months after the end of the program) has been observed. One would expect at least MBA trainings in business schools to prepare students to be good managers and job creators. However, given that conventional MBA programs are mostly for young people with little or no experience, Mintzberg (2004) argues that regular business school training

³ African Development Bank (AfDB). “Appraisal Report” http://www.afdb.org/fileadmin/uploads/afdb/Documents/Côte_d'Ivoire_-_Youth_Employability_and_Insertion_Support_Programme_PAEEIJ_-_Appraisal_Report.pdf.

⁴ European Union, <http://ec.europa.eu/growth/smes/> See definition of SME by the EU: https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en.

emphasizes on analytics and techniques. As a result, it leaves graduates with the wrong impression that they have been trained as managers. He claims that business school training should take an innovative approach by encouraging practicing managers to learn from their experience. To the best of our knowledge, no such studies like Autio (2001) or Fayolle and Benoît (2013) has been carried out in Africa. We therefore fill the gap by investigating the marginal impact of entrepreneurial education on student's entrepreneurial intent in higher education across many institutions of higher education in Abidjan, Côte d'Ivoire. The contribution of such a study is to provide higher education with a novel and innovative approach to higher education. After the introduction, the second part of the paper discusses the methodology and the data. The third part presents the results and interpretation of the results before the conclusion, in part four.

2 Methodology and Data

2.1 Design

Ajzen (1991) defines intention as an indicator of the willingness to try something, the effort that one is ready to exert in order to behave in a certain way. Along the same lines, Davidson (1995) considers entrepreneurial intent as the decision to start a business in a planned way. It matters at this point to restate that the study focuses on the determinants of the willingness of students to engage in entrepreneurial activities. Ajzen's model suggests the following equation to capture entrepreneurial intent.

$$\text{Intent} = \alpha * \text{Beliefs} + \beta * \text{Subjective_Norm} + \gamma * \text{Perceived_Control} \quad (1)$$

According to Eq. (1), above, three main variables determine intention. The attitudes towards the behavior which we term "beliefs" to reflect the fact that this is about how an individual evaluates the consequences of his behavior. The subjective norms (Subjective_Norm) refer to the internalized value system that derives from social values. The perceived control (Perceived_Control) is an evaluation of one's capacity to implement the behavior.

We use stratified random sampling to select a random 300 students based on the distribution of public versus private institutions, and universities versus "*grandes écoles*" in Abidjan as reflected in the 2013–2014 statistical yearbook of higher education⁵. Given that the study aims at investigating the marginal impact of entrepreneurship education on entrepreneurial intent, we focused on having a representative sample of institutions of higher education in Abidjan.

⁵ The book is titled «Annuaire Statistique de l'Enseignement Supérieur de Côte d'Ivoire 2013–2014».

The interviewees⁶ come from 22 institutions of higher education located mainly in four city halls (communes) of Abidjan: Adjamé, Cocody, Plateau and Yopougon. As shown in Table 1 above, 55% of them are from universities while 45% are from *grandes écoles*. The latter tend to be elite schools while universities tend to welcome pretty large number of students. The student body is almost fairly distributed between private (47,92%) and public school (52,08%). The interviews took place, over a month, from August 12th to September 15th. A pilot test of the questionnaire was first administered to students in CERAP to insure the proper understanding of the questions by interviewees. Questions were then rephrased for use during the survey. A typical survey would take between 10 to 15 min. Students interviewed have a very diverse background in terms of the topics studied at university (sciences, literature, business administration, etc.).

Table 1. Sampling of origin institutions of the interviewees

Type/Institution	Private	Public	Total	%
University	16	116	132	55%
“Grandes Ecoles”	99	9	108	45%
Total	115	125	240	100%
%	47,92%	52,08%	100%	

In order to answer the research question on the marginal impact of entrepreneurship education on entrepreneurial intent, two hypotheses were tested:

Hypothesis 1: An entrepreneurship course has an impact on entrepreneurial intent

Hypothesis 2: An entrepreneurship ecosystem has an impact on entrepreneurial intent, where an entrepreneurship ecosystem refers to both theoretical and practical courses aimed at developing entrepreneurship. It includes courses, mentoring, exposure to entrepreneurial activities, financial and management skills building as well as anything included in business development services.

Given the data gathered and the binary nature of the dependent variable, a probit regression was used to predict the marginal impacts of the independent variables on the dependent variable of interest. The following sub-section provides a description of the main variables of interest.

2.2 Descriptive Statistics

The dependent variable measures student entrepreneurial intent, i.e., the willingness of a student to engage in entrepreneurial activities. Given the definition discussed above,

⁶ I am very grateful to two students Jaël Konan from the Jesuit University Institute (CERAP-INADES) and to Gnougou Ouattara (from the National School for Applied Economics and Statistics, ENSEA) who helped in the data collection. Gnougou Ouattara wrote an M.A. dissertation at the ENSEA, using the same data. I am also grateful to Monde Muyangwa (Woodrow Wilson Center, Washington DC) for very insightful ideas on reframing higher education in Africa.

it is worth recalling that entrepreneurial intent captures the disposition, the beliefs and the confidence of a student to take the necessary steps to be an entrepreneur. Close to half of the students, i.e., 47.5% of them intend to be entrepreneurs (see Table 2 below).

Table 2. Variable characteristics

#	Variable name	Freq./Mean	Freq. (%) / St. Dev.	Comments
1	Entrepreneurial intent	114	47.5	Measures entrepreneurial intent. Intends/wants to be an entrepreneur to be self-employed
2	Entrepreneurship course	75	31.25	Have already taken a course in entrepreneurship, as part of their curriculum or as an elective
3	Prepared to entrepreneurship	76	31.67	Think that overall, their curriculum prepares them to be entrepreneurs
4	Entrepreneurship course or preparation	129	53.75	<i>Either</i> took a course in entrepreneurship <i>or</i> think they curriculum prepared them to it, <i>or both</i>
5	Entrepreneurship course and preparation	22	9.17	Took an entrepreneurship course <i>and</i> think their curriculum prepared them to entrepreneurship
6	Science major	70	29.17	Math, Sciences, biology, etc. (versus literature, etc.)
7	Sex (males)	144	60	Majority are males
8	Internship	58	24.17	Have done internship
9	Type of school (Private vs. public)	108	45	Majority in public school
10	Age in years	22.89	2.93	Min Max = [16–35]
11	Year at University	2.52	1.32	Min Max = [1–5]

Abs. = absolute, Freq. = Frequency, St. dev. = Standard Deviation

Three independent variables are worth being discussed: “entrepreneurship course”, “entrepreneurship ecosystem”, and “internship”. An entrepreneurship course is any course (from an entrepreneurship awareness course to a thorough in-depth one) that a student declares to have taken. Given the new reform of higher education in place in Côte d’Ivoire and other countries in the CAMES⁷ region, such course would be a two

⁷ CAMES stands for «Africa and Malagasy Council for Higher Education», *Conseil Africain et Malgache pour l’Enseignement Supérieur*. The countries of CAMES engaged in a reform called «LMD reform» that organises studies at university in three degrees: a BA, a MA and a Doctorate. This reform builds on the «Bologna Process» in higher education which took place in Western Europe.

to three credits course, i.e., a 30 to 45 hours⁸. The second independent variable of interest is entrepreneurship ecosystem. An ecosystem gathers together the livings in a particular biotope or place and these livings interact. The value added of this variable in comparison to the previous one (entrepreneurship course) is that it has a practical component. This practical component could include some type of projects to be conducted, interactions with enterprises, mentoring, etc. Overall, this variable is a proxy for “does the curriculum prepares students to be entrepreneurs”? To that extent, this variable is less about the beliefs than about the education content of the curriculum, as perceived or experienced by students. That’s why this study could also be thought as an analysis of the demand for entrepreneurship education in Abidjan. The third variable of interest is “internship”. Students answer the question: “have you done an internship”? An internship refers to a period of practical work whereby students have work experience outside of their classrooms.

We also control for variables of interest such as gender and student science background. Only 29,17% of the students have a science background while 60% of the interviewee are males. They are 23 years old on average and have already spent 2.5 years on average at university. In the sample, students have a maximum of 5 years spent at university. Table 2 below provides an overview of the main variables and the section below discusses the results of the probit regressions and also provides policy recommendations.

3 Results and Interpretation

3.1 Results of the Regression Analysis

The results of the regression analysis suggest that taking an entrepreneurship awareness course does not have a statistically significant impact on entrepreneurial intent. On the other hand, benefiting from an entrepreneurship ecosystem increases the likelihood of a student choosing to become an entrepreneur by 50% (see Table 3 below). We test two other models with variation of the ecosystem variables. Model (1) that tests the impact of an entrepreneurial course could be considered as a baseline. In model (3), we put together students who either took awareness courses or benefited from an entrepreneurship course. In model (4) only students who declared to benefit from both an awareness course and an entrepreneurship ecosystem are taken into account. The magnitude of the marginal impact of the ecosystem variable confirms the importance of benefiting from an ecosystem versus just taking an awareness course: 50% for model (2), 32% for model (3) and 42% for model (4). These marginal effects are significant with respectively 95%, 99% and 99.9% confidence interval.

⁸ A weakness of this variable though is that we cannot control for quality (content), quantity (number of credit hours) and type (compulsory or elective) of the course across institutions and programs.

Table 3. Marginal impact of education on entrepreneurial intent

Y = Entrepreneurial intent	Model (1)	Model (2)	Model (3)	Model (4)
<i>Ent. course</i>	0.01 (0.12)			
<i>Ent. Ecosystem</i>		0.50*** (7.74)		
<i>Course or Ecosystem</i>			0.32*** (4.59)	
<i>Course and Ecosystem</i>				0.42** (4.57)
<i>Internship</i>	-0.23* (-2.42)	-0.22* (-2.14)	-0.24* (-2.46)	-0.23* (-2.30)
<i>Valuing Entrep.</i>	0.38*** (4.16)	0.30* (2.75)	0.33** (3.23)	0.34*** (3.41)
Constant	Yes	Yes	Yes	Yes
Region fixed effect	Yes	Yes	Yes	Yes
Log likelihood ration	-146.74	-124.87	-137.12	-140.95
R-Square	0.12	0.25	0.17	0.15
Observations	240	240	240	240

t statistics in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001

A counter intuitive result concerns the marginal impact of the variable “internship”. The variable “internship” is expected to capture the practical side of the curricula and the ability of the curricula to prepare students for either the job market or entrepreneurship. Results show that doing an internship reduces the likelihood of a student willingness to become an entrepreneur. Does this confirm that most students are prepared to be job seekers and not job creators? Surprisingly enough, we expected also the variable “type of institution of higher education” to matter. However, its marginal effect is not statistically significant across the different models tested. As a matter of fact it could be assumed that students in private (vs public) institutions would benefit from different exposure with respect to entrepreneurship. This surprising situation is also the case for the variable “science major”. What type of policy recommendations could be drawn from such results?

3.2 Policy Implications

The very first policy implication of these results is that, beside the information it gives to students, an entrepreneurship course does not lead students to engage in entrepreneurship. As governments in West Africa, in general, and in Côte d’Ivoire, in particular, strive to innovate in higher education, this result is a warning against ineffective spending of resources on entrepreneurship curricula. On the other hand, schools which aim at promoting entrepreneurship should choose to build entrepreneurship ecosystems. Favoring the emergence of an entrepreneurship ecosystem has the advantage of insuring

some type of return on investment as the marginal impact on student entrepreneurial intent is pretty strong (50% increase).

Last but not least, a final policy implication concerns the type of internships done by students. First of all, less than a quarter of all student interviewed have done an internship (see Table 1). The aforementioned LMD reform is supposed to provide both a strong theoretical and practical training. Schools should be encouraged to raise the share of students doing internships. However, more importantly, internships could not only consist in exposure to wage jobs but also in professional experiences whereby students learn to be job creators. This raises in turn the issue of the collaboration between the private sector (mostly firms) and schools with the mediation of governments, the civil society, communities, parents, and all education stakeholders. In a country that experiences a solid and relatively sustained economic growth and where business is booming as confirmed by the high inflow of foreign direct investment⁹, schools could favor internships¹⁰ with entrepreneurs to raise a new race of Ivorians who are eager to be job creators rather than just job seekers.

4 Conclusion: Reframing Higher Education in West Africa

This study investigated the determinants of entrepreneurship intent among students in a sample of 22 institutions of higher education in the city of Abidjan. We found that simple entrepreneurship awareness courses do not have a statistically significant impact on students' decision to engage in entrepreneurship. However, when students benefit from an entrepreneurship ecosystem, their likelihood of becoming entrepreneurs increases by 50%. The contribution of this study is threefold. First, it fills the gap in the literature on innovative or alternative ways of educating that promotes entrepreneurship by providing empirical evidence from Côte d'Ivoire. Second, it confirms along the lines of Autio (2001) and Fayolle (2013) that entrepreneurship education matters for entrepreneurial intent based on the Theory of Planned Behavior. Third, it follows that governments and policy makers who are eager to promote entrepreneurship in higher education should focus on creating entrepreneurship ecosystems instead of just requiring institutions of higher education to include entrepreneurship awareness courses in their curricula.

The study suggests also that internships do indeed prepare students to be good job seekers. If the aim of education is also to train job-creators, then rethinking the goals of internships is crucial. Overall, the results of this study call for reframing higher education in West Africa, in general, and in Côte d'Ivoire, in particular. Further studies linking entrepreneurship intent and the actual creation of enterprises would complement this study. Second, looking at the determinants of entrepreneurship in education curricula at secondary or even primary school level would be appropriate as a decision to become an entrepreneur might come earlier in life. Last but not least, this study focused on the demand side of entrepreneurship education. Investigating the supply side would help

⁹ See the study by BNP Paribas Bank at <https://www.tradesolutions.bnpparibas.com/fr/implanter/cote-d-ivoire/investissement> on FDI in Côte d'Ivoire, consulted January 26th, 2017.

¹⁰ Note that in the business world, a typical experience or exposure with entrepreneurs with the aim of becoming an entrepreneur will be termed as coaching rather than internship.

check whether there is any mismatch between the perceptions of students and school administration about the aim of education curricula as far as entrepreneurship is concerned.

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