

Global University Entrepreneurial Spirit Students' Survey

# **Entrepreneurial Intentions: A look at behavior of Students attending Ecuadorian Universities**



**National Report, Ecuador 2016** 

Jácome Mariella, Jácome Omar

#### **Preface**

Entrepreneurship is one important driver that has been recognized by many researchers as the motor of societies because it generates economic growth overall if startups are based on innovation. Over the years, societies have individuals who have entered universities to gain new knowledge and skills which let them become an entrepreneur, so these students represent the entrepreneurs of tomorrow. Hence, it is necessary to know how many students intend to pursue an entrepreneurial career, why, why not, and how many are in the founding process or have already created a business.

The GUESSS Project is dedicated to investigate the entrepreneurial intentions of university students worldwide since 2003. This is the first year the Ecuadorian team is part of the GUESSS project and had the responsibility to present the National Report of this country. The question of this research was set out as followed: what is the entrepreneurial intention of the university students of Ecuador?

Main findings which are shown broadly in the national report of Ecuador answer this question as well as other relevant aspects about entrepreneurial intention that will provide detailed insights which would be relevant to comprehend the process to establish startups based in innovation. The interest of the researchers who have developed this research in Ecuador is to contribute with information that could be meaningful to develop strategies and decisions through the comprehension of drivers that influenced entrepreneurial intentions in the Ecuadorian context.

Ecuador GUESSS team would like to thank Universidad Católica de Santiago de Guayaquil for giving us the opportunity to send out the questionnaire to all students at the university. In the same way, researchers also wish to thank our Ecuadorian partner universities such as: Universidad Tecnológica Ecotec, Universidad de Guayaquil, and Universidad Estatal Amazónica for their willingness to participate in the survey and sent the survey among their students.

In addition, Ecuador GUESSS team wishes to thank the students who participated in the survey and spent their time to complete the online questionnaire. Finally, but not least many thanks to Professor Sieger and the other colleagues of the University of St. Gallen and University of Bern who managed the international project, and in the same way to our colleagues overall who led the research in their countries because their ideas and findings had inspired the present national report.

Thanks for everyone who made it possible to develop the first Edition of GUESSS in Ecuador 2016 Edition.

Prof. PhD (c). Mariella Jácome Ortega Country Representative of GUESSS in Ecuador, GEMIEC Founder Professor of Universidad Católica de Santiago de Guayaquil mariella.jacome@gemiec.com

Prof. PhD. Omar Jácome Ortega
Co-writer and Researcher of Project GUESSS in Ecuador, GEMIEC Co-Founder
Professor of Universidad Católica de Santiago de Guayaquil
omar.jacome@gemiec.com

**Citation:** Jácome, M. & Jácome, O. (2016). Entrepreneurial Intentions: A look at Behavior of Students attending Ecuadorian Universities. Global University Entrepreneurial Spirit Students' Survey 2016. National Report Ecuador. Guayaquil, Ecuador: Universidad Católica de Santiago de Guayaquil.

#### Acknowledgements

The National Report GUESSS, Global University Entrepreneurial Spirit Student's Survey, on Ecuador 2016 was carried out by researchers: professor PhD(c). Mariella Jácome Ortega and professor PhD. Omar Jácome Ortega. Both are professors of Universidad Católica de Santiago de Guayaquil and are founders of GEMIEC that is a research group on entrepreneurship and family business in Ecuador who are interested in contributing about some topics related to entrepreneurial intentions and dynamics of relevant aspects to family business administration.

The researchers are grateful with all representatives of Ecuadorian Universities who led the project inside the Universities where they collaborate daily. An important support was provided by PhD. Nancy Wong Laborde (Universidad Católica de Santiago de Guayaquil University); PhD. Rafael Sorhegui (Universidad Tecnológica Ecotec); PhD. Dayana Lozada (Universidad de Guayaquil); and, PhD. Luis Manosalvas (Universidad Estatal Amazónica).

An important recognition to GEMIEC members, who were responsible for coordinating the data collection process and tracking objectives of committed responses with the international project director PhD. Phillip Sieger.

Furthermore, the researchers thanks to the project partners collaborated with important resources to develop the first Edition of GUESSS in Ecuador. The project GUESSS in Ecuador had the contribution of national and international partners. The following national partners contributed during the development of the project: Productos Metalúrgicos S.A., PROMESA, an important leading Ecuadorian company which is engaged to distribute products from the hardware and spare parts industry. The subsequent international partners contributed to the project: Ernst & Young, EY; and, MAKITA who is a largest manufacturer of industrial power tools from Japan which has factories around the world.

Finally, the researchers are grateful to all students who contributed with the information gathered in the Global University Entrepreneurial Student's Survey in Ecuador because thanks to this participation, it was possible to show the main findings of this research.

## **Table of Contents**

1. Intr	oducti	on	. 1
1.1	Bac	ekground of the Study	. 1
1.2	The	eoretical Framework	. 2
1.3	Pro	ject Organization and Data Collection Procedure	. 3
2.Part	icipant	s and Sample	. 9
2.1	Studer	nt Demographics	. 9
2	1.1 Aş	ge	. 9
2	1.2	Gender	10
2	1.3	Nationality	10
2.2	Uni	iversity Studies	10
2	2.1	Current Level of Study	10
2	2.2	Fields of Study	11
3. Car	eer Ch	oice Intentions and entrepreneurial intentions	12
3.1	Gei	neral Overview	12
3.2	Ent	repreneurial Intentions	14
3.3	Mu	lti-item Entrepreneurial Intention	20
4. Dri	vers of	Entrepreneurial Intentions	22
4.1	Uni	iversity Context	22
4.2	Ent	repreneurial skills (Locus of control, Attitude, and Entrepreneurial Self-	
effi	cacy).		27
4.	2.1 Lc	ocus of Control	27
4	.2.2 Se	lf-Efficacy and Entrepreneurial Abilities	29
4	2.3 Er	ntrepreneurial Attitude	30
4.3	Motive	es to be a Founder	33
4.4	Contex	xt Reaction	35
4.5	Family	Background	36

4.6 The Society as a whole	37
5. Share of Nascent and Active Entrepreneurs	39
5.1 Nascent Entrepreneurs	41
5.1.1 Characteristics of Nascent Entrepreneurs	41
6. Actives Entrepreneurs	47
6.1 Characteristics of Active Entrepreneurs	47
7. Conclusions and Recommendations	52
8. References	55
9. Country Teams of the 2016 Edition	59
10. Sponsors and Partners	60
11. About the Authors	61

# **List of Figures**

Figure 1. Theoretical framework of GUESSS 2016	3
Figure 2. Ecuador's participating universities	6
Figure 3. Age of Students	9
Figure 4. Gender of Students	. 10
Figure 5. Student's Study Level	. 10
Figure 6. Fields of Study	. 11
Figure 7. Career choice intentions in detail – Ecuador	. 13
Figure 8. Career groups directly and 5 years after studies – Ecuador	. 14
Figure 9. Share of intentional founders of Ecuador and International average	. 16
Figure 10. Entrepreneurial intentions depending on field of study – Ecuador	. 17
Figure 11. Intentional founders (LEBS students) 5 years after studies across countrie	s 18
Figure 12. Gender differences in entrepreneurial intentions	. 18
Figure 13. Gender differences in entrepreneurial intentions across fields of study	. 19
Figure 14. Entrepreneurial intention	. 21
Figure 15. Climate for entrepreneurship	. 23
Figure 16. Attendance of entrepreneurship offerings	. 24
Figure 17. Share of intentional founders (5 years after studies) depending on	
entrepreneurship education	. 25
Figure 18. Entrepreneurial Learning Assessments	. 26
Figure 19. Internal Locus of Control	. 28
Figure 20. Locus of Control	. 28
Figure 21. Skills among intentional founders and intentional employees (1-7 scale)	. 30
Figure 22. Entrepreneurial Attitude	. 31
Figure 23. Entrepreneurial attitude	. 32
Figure 24. Motivations and Goals	. 34
Figure 25. Context Reaction	. 36
Figure 26. The society as a whole	. 39
Figure 27. Share of Nascent Entrepreneurs	. 40
Figure 28. Share of Active Entrepreneurs	. 40
Figure 29. Time horizon of completing business creation (in months) Ecuador and	
International average	. 41
Figure 30. Business as the main occupation after graduation	41

Figure 31. Industrial Sector Planned of New Ventures	42
Figure 32. Gestation Activities of Nascent Entrepreneurs	44
Figure 33. Ownership share in the new business	45
Figure 34. Number of planned co-founders Ecuador	45
Figure 35. Number of planned co-founders	46
Figure 36. Origins of ideas of Nascent Entrepreneurs	46
Figure 37. Year of Foundation of the existing firms	47
Figure 38. Year of Foundation of the existing firms	47
Figure 39. Number of co-founders among active entrepreneurs	48
Figure 40. Number of co-founders among active entrepreneurs Ecuador and	
International average	48
Figure 41. Number of employees of active firms	49
Figure 42. Ownership share of active firms	49
Figure 43. Industry sectors of active firms	50
Figure 44. Satisfaction of Active Entrepreneurs in ranges	51

## **List of Tables**

Table 1. Universities and Responses Rates	5
Table 2. Universities and Responses Rates by Country	7
Table 3. Universities and Responses Rates by Country	8
Table 4. Career choice intentions right after studies and 5 years after studies	. 12
Table 5. Career choice intentions right after studies and 5 years after studies by gende	er
	. 15
Table 6. Entrepreneurial intention, total average and difference between Agreements	
and Disagreements	. 20
Table 7. Climate for Entrepreneurship, Total Average and Differences between	
agreements and disagreements	. 22
Table 8. Entrepreneurial Learning Assessments, Total Average and Differences betw	een
Agreements and Disagreements	. 26
Table 9. Locus of Control, Total Average and Differences between Agreements and	
Disagreements	. 27
Table 10. Self-Efficacy and Entrepreneurial Abilities, Average and Differences between	een
Agreements and Disagreements	. 29
Table 11. Entrepreneurial Attitude, Total Average and Differences between Agreeme	ents
and Disagreements	. 31
Table 12. Motivations and goals to start the company	. 33
Table 13. Context reaction, total average and differences between Agreements and	
Disagreements	. 35
Table 14. Family background	. 36
Table 15. What is the ownership sharing that is in the hands of your family?	. 37
Table 16. The society as a whole	. 38
Table 17. Industry sectors of planned new ventures, by Gender	. 43

#### 1. Introduction

#### 1.1 Background of the Study

University Entrepreneurial Spirit Students' Survey (GUESSS) is an international research project which investigates the entrepreneurial intentions and activities of students using a geographical and temporal comparison. The GUESSS Project (Global University Entrepreneurial Spirit Students' Survey) is an international research project which is organized and managed through a cooperation of the University of St. Gallen and the University of Bern. Both are Swiss Universities. The GUESSS Project Manager is Prof. Dr. Philipp Sieger.

The 2016 edition of GUESSS was conducted in Spring/Summer 2016 in 50 countries, at more than 1.000 universities who participated on this important project. The 2016 edition of GUESSS would not have been possible without the invaluable effort and support of all country teams, university partners, Ernst & Young as the international project partner, and of course the students who responded to the invitation for participating on the survey. This helpful effort of many researchers was relevant because 122.000 completed students' responses was gathered and then were analyzed to find outstanding findings.

GUESSS identifies students who answer the survey in two different data collection waves, which allow a longitudinal analysis. On a general level, GUESSS addresses various stakeholders: students, researchers, entrepreneurs, policy makers, universities, and others. In the case of Ecuador, it is the first year when researchers led the research project in the country. In Ecuador, the country representative of GUESSS project is Professor Mariella Jácome Ortega who is responsible to lead the research process in Ecuador.

The main goal of GUESSS is to generate unique and novel insights into student entrepreneurship in the form of academic output. Several research topics are investigated in detail, such as: (a) entrepreneurial intentions; (b) nascent

entrepreneurship; (c) family firm succession; (d) growth and performance of new ventures; and, (e) Influencing factors of entrepreneurial intentions in different levels, such as: individual level as motives, preferences, social identity; family level as family structure, family relationships, university level as entrepreneurial education, climate and learning, and, contextual such as culture and institutions.

#### 1.2 Theoretical Framework

The theoretical framework behind GUESSS is the Theory of Planned Behavior (TPB). The theory of planned behavior has emerged as the most influential conceptual frameworks for the study of human activity (Ajzen1988, 2001). Ajzen's theory considers that human behavior is guided by three considerations in combination: attitude toward the behavior, subjective norm, and perception of behavioral control. This driver led to the formation of a behavioral intention with high accuracy (Ajzen, 1991, 2002; Fishbein & Ajzen, 1975). Ajzen's Theory (2006) distinguished between intentions and behaviors and considered that a supportive social environment raises the odds that the individual is willing to start his own business.

The first driver is the attitude toward behavior and refers to the level of agreement or disagreement of a person related to a favorable or unfavorable evaluation of the behavior in question. The second predictor is a social factor named subjective norm; it refers to the perceived social pressure to perform or not to perform the given behavior. The third antecedent of intention refers to the perceived ease or difficulty of performing behavior and it is assumed to reflect experience.

This behavioral control is explained by two aspects. In the first place, the fact that the individual perceives that he has more controllability (locus of control) over his environment, will favor the probability to start a company. Secondly, the self-efficacy that the individual has as a function of the skills and knowledge for managing his own company generates a positive effect on the intention to start a company. Generally, the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, will be a stronger individual's intention to perform behavior under consideration (Azen, 1991).

GUESSS focuses on general career choice intentions and entrepreneurial intentions of students. Other factors which could impact the evolvement of career choice or entrepreneurial intentions are investigated through the three main elements of the theory of planned behavior. These factors are the university context, the family context, personal motives, and, finally, the social and cultural context (Durst & Sedenka, 2016).

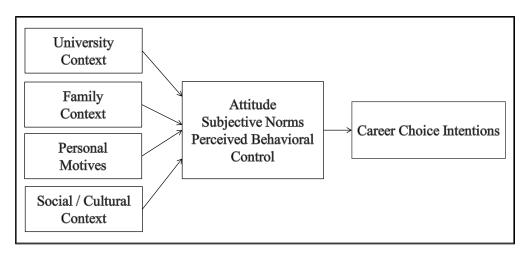


Figure 1. Theoretical Framework of GUESSS 2016.

#### 1.3 Project Organization and Data Collection Procedure

GUESSS stands for Global University Entrepreneurial Spirit Students 'Survey, an international research project that examines entrepreneurial intentions and activities related with this topic in universities overall. The project goal is to examine the entrepreneurial behavior and intentions of students to illustrate to what extent students are already self-employed or if they would like to become in the future.

GUESSS represents an entrepreneurship research platform. The main goals of the project are:

• GUESSS helps to systematically record the founding intention and activity of students on a long-term basis, and makes a temporal and geographical comparison possible (panel study).

- GUESSS offers a temporal and geographical comparison providing universities with insight into the organization of entrepreneurship. For example: the form of entrepreneurship courses, founding climate, infrastructure, and others.
- GUESSS allows for a temporal and geographical comparison of individual-based characteristics that impact the founding intention and activity of students.

Additionally, the project has secondary goals which are quoted continuously:

- GUESSS helps with the verification and establishment of explanatory approaches at various levels of analysis. For example: individual, process, macroeconomically effectiveness. These aspects are useful for the investigation of the founding intent and activity of students.
- GUESSS enables the participating countries to reflect on their entrepreneurial spirit regarding specific basic founding conditions that drive students to become entrepreneurs.
- GUESSS can observe the quality of the start-ups created by students such as jobs, turnover, and others.
- GUESSS helps to identify the perceived pitfalls and retentions in the students' founding process. Based on that, recommendations can be derived.
- GUESSS helps generate research models and verify existing ones.

GUESSS is organized and managed through a cooperation of the University of St. Gallen and the University of Bern (both Switzerland). The GUESSS Project Manager is Prof. Dr. Philipp Sieger, He is supported by a Board consisting of Prof. Dr. Urs Fueglistaller (Chairman), Prof. Dr. Thomas Zellweger, Dr. Frank Halter and Prof. Norris Krueger and by his Assistant Professor, Tenure Track, at the University of Bern. GUESSS has been established in 2003 at the University of St. Gallen (Switzerland). Every 2 or 3 years, a global data collection effort takes place. The seventh wave has been conducted in Spring/Summer 2016. In 2016, 50 countries participated in GUESSS.

This led to a dataset with more than 122.000 completed responses from students from more than 1.000 universities. For every participating country, there is one responsible country team which coordinates data collection in that country. In each participating country, there is one official country team who is responsible for data collection in that country. Specifically, these teams send the survey invitations to their own students and recruit other university partners in their country.

The data collection took place among all countries within the deadline. In Ecuador, the GUESSS Ecuador team was formed where its main research focus is students' entrepreneurial intentions and activities, including the topic of family firm succession. This team led by Professor Mariella Jácome Ortega, country representative of the GUESSS project in Ecuador and the whole process in Ecuador is supported by Professor Omar Jácome Ortega, a member of this team.

The national project was developed thanks to some partner Universities, which were responsible for the survey at a national level. Without their efforts, the project would not have been completed up to an international level. The survey was executed in the period that began in May and ended in July 2016. The survey had responses of 8.211 students from five universities located in Ecuador.

The data gathering process is done through a centrally managed online survey which includes validated and up-to-date measurement instruments. This allows detailed cross-country comparisons and within-country analysis. The distribution of respondents by universities is as below in the next table:

Table 1. Universities and Responses Rates

University	Responses	% Responses
Universidad Católica de Santiago de Guayaquil	3.824	46,57%
Universidad de Guayaquil	2.749	33,48%
Universidad Estatal Amazónica	1.408	17,15%
Universidad Tecnológica Ecotec	208	2,53%
Other	22	0,27%
Total	8.211	100%

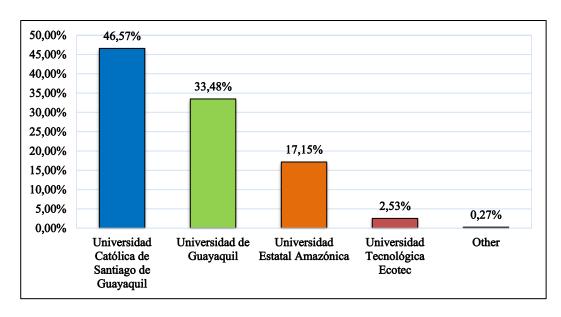


Figure 2. Ecuador's participating universities

For the developing of this international research each country has a country representative who oversees coordinating the GUESSS project as one of the most important international research project. The original questionnaire was in English and was translated into Spanish by the eleven Latin American universities. The questionnaire was hosted on the website provided by the international GUESSS team.

In Ecuador, the questionnaire provided by GUESSS international organization provided by Professor Sieger was posted on a page of the GEMIEC website, a group of researchers who collaborated in the execution of the project in Ecuador. The website explained background, objectives, among other aspects that allowed the students participating in the process to review the scope of the project.

Table 2 shows the global according to the region of GUESSS 2016. In Africa, 1.67% of respondents were obtained, in Americas regions a total of 33.17% was obtained, in Asia a total of 6.84%, in Europe a total of 56.40%. Finally, Oceania reported a total of 1.93% of answers. The next table summarizes the overall responses by country of the GUESSS 2016 survey.

Table 2. Universities and Responses Rates by Country

Region	Code	Country	Responses	Overall Responses	Responses by Region	Ranking Responses
Africa	MAR	Morocco	2.044	1,67%	100,00%	21
Americas	ECU	Ecuador	8.211	6,70%	20,21%	2
Americas	BRA	Brazil	7.417	6,05%	18,25%	3
Americas	CHI	Chile	6.077	4,96%	14,95%	6
Americas	ESA	El Salvador	4.653	3,80%	11,45%	9
Americas	COL	Colombia	3.832	3,13%	9,43%	12
Americas	PAN	Panama	3.273	2,67%	8,05%	15
Americas	ARG	Argentina	2.625	2,14%	6,46%	18
Americas	URY	Uruguay	1.396	1,14%	3,44%	24
Americas	PER	Peru	1.297	1,06%	3,19%	25
Americas	MEX	Mexico	1.207	0,99%	2,97%	26
Americas	CAN	Canada	297	0,24%	0,73%	40
Americas	USA Vermont	USA Vermont	187	0,15%	0,46%	42
Americas	USA Stetson	USA Stetson	166	0,14%	0,41%	43
Asia	CHN	China	3.274	2,67%	39,10%	14
Asia	KOR	Korea	2.603	2,12%	31,08%	19
Asia	JPN	Japan	1.490	1,22%	17,79%	23
Asia	PAK	Pakistan	580	0,47%	6,93%	36
Asia	KAZ	Kazakhstan	253	0,21%	3,02%	41
Asia	MYS	Malaysia	137	0,11%	1,64%	45
Asia	IND	India	37	0,03%	0,44%	51
Europe	GER	Germany	15.984	13,05%	23,13%	1
Europe	ESP	Spain	7.373	6,02%	10,67%	4
Europe	POL	Poland	6.388	5,21%	9,25%	5
Europe	HUN	Hungary	5.182	4,23%	7,50%	7
Europe	POR	Portugal	4.685	3,82%	6,78%	8
Europe	ITA	Italy	4.446	3,63%	6,43%	10
Europe	RUS	Russia	4.152	3,39%	6,01%	11
Europe	AUT	Austria	3.755	3,07%	5,43%	13
Europe	SVK	Slovakia	3.266	2,67%	4,73%	16
Europe	SUI	Switzerland	2.943	2,40%	4,26%	17
Europe	HRV	Croatia	1.555	1,27%	2,25%	22
Europe	CZE	Czech Republic	1.135	0,93%	1,64%	27
Europe	ENG	England	1.074	0,88%	1,55%	28
Europe	EST	Estonia	811	0,66%	1,17%	29
Europe	IRL	Ireland	807	0,66%	1,17%	30
Europe	BEL	Belgium	771	0,63%	1,12%	31
Europe	BLR	Belarus	716	0,58%	1,04%	32
Europe	FRA	France	714	0,58%	1,03%	33
Europe	GRE	Greece	649	0,53%	0,94%	34
Europe	SWE	Sweden	606	0,49%	0,88%	35
Europe	SLO	Slovenia	575	0,47%	0,83%	37
Europe	FIN	Finland	532	0,43%	0,77%	38
Europe	LTU	Lithuania	426	0,35%	0,62%	39
Europe	LIE	Liechtenstein	159	0,13%	0,23%	44
Europe	MKD	Macedonia	124	0,10%	0,18%	46
Europe	LUX	Luxembourg	82	0,07%	0,12%	47
Europe	UKR	Ukraine	73	0,06%	0,11%	48
Europe	ALB	Albania	70	0,06%	0,10%	49
Europe	NOR	Norway	41	0,03%	0,06%	50
Oceania	AUS	Australia	2.359	1,93%	100,00%	20

In the case of America, the distribution of responses per region is the following participation: 75.93% of answers corresponding to South American students, 22.47% of the answers correspond to Central American students while 1.60% of answers were obtained from students of North America. Among the countries that participated in South America are Ecuador, Peru, Colombia, Brazil, Argentina, Chile and Uruguay. It is worth mentioning that the percentage of participation per region is based on the total number of answers obtained from the opinions of the students enrolled in the Universities participating in the GUESSS research project 2016.

Table 3. Universities and Responses Rates by Country

Responses per Region	Responses	% Responses		
<b>Global Responses</b>	122.509	100,00%		
Africa Responses	2.044	1,67%		
Americas Responses	40.638	33,17%		
Asia Responses	8.374	6,84%		
Europe Responses	69.094	56,40%		
Oceania Responses	2.359	1,93%		

The GUESSS research project was supported by Erns and Young, an recognized firm multinational accounting firm headquartered in London, that is one of the largest professional services firm in the world. In the case of Ecuador, this is the first participation in the study, and thus, 8.211 students participated in this project, being the second country with the highest level of student participation followed by Germany.

#### 2.Participants and Sample

#### 2.1 Student Demographics

#### 2.1.1 Age

Researchers had said that some factors which influence the undertaking of entrepreneurial intentions are demographic elements such as age and gender. Storey (1994) evidenced some research that shows that people mostly decide to establish their own firms between the ages of 25 to 45. However, Ferreira (2003) mentioned that age seems to be negatively related to innovation and growth orientation (Amos & Alex, 2014).

The next figure shows the distribution of responses according to the years that students had when they were invited to answer the questionnaire of the GUESSS research project, Edition 2016. Most of the students who participated in the survey (80,6%) were under the age of 24, followed by the 25-30 years old (12,8%) and over 31 (6.6%) age bracket.

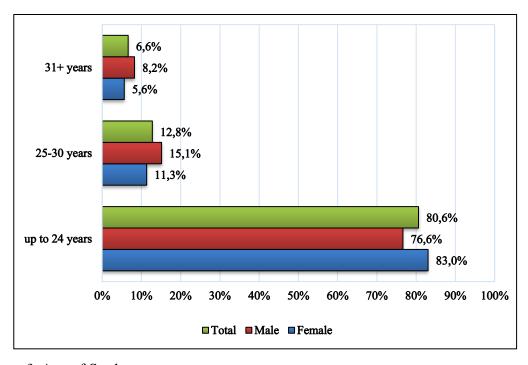


Figure 3. Age of Students

#### **2.1.2** Gender

The Ecuadorian GUESSS 2016 sample consisted of more female (61.9%) than male (38.1%) students. Making comparisons with the international data.

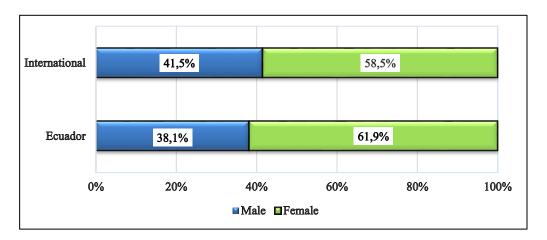


Figure 4. Gender of Students

#### 2.1.3 Nationality

Most of the individuals (98.5%) who participated in the survey were Ecuadorians. Other nationalities were: Americans (0.2%) and Latin Americans (0.3%).

#### 2.2 University Studies

#### 2.2.1 Current Level of Study

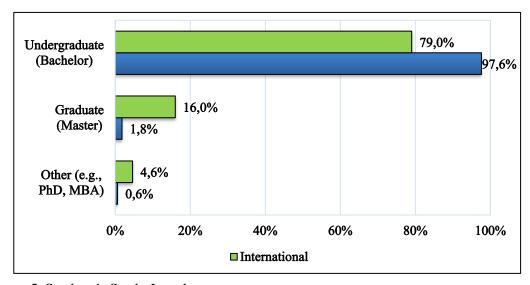


Figure 5. Student's Study Level

Most of the individuals are undergraduate students (97.6%), 1.8% graduate students, and, 0.6% PhD or MBA students. Making a comparison with the results of the international report, the level of study reported as graduate (1.8%) and others than the included PhD and MBA programs (0.6%) are lower than that in the international sample with 16% and 4.6% respectively.

#### 2.2.2 Fields of Study

Other relevant question asked of students was the field of study. Based on this information, the report shows the area which students were studying during the period of the research: Law & Economics included Business Sciences (35.5%); Engineering included Computer Sciences and Architecture (35%); Human Medicine and Health Sciences (12.1%); Social Sciences such as: Psychology, Politics, Educational Science (4.3%); Arts and Humanities such as: Linguistics, Cultural Studies, Religion, Philosophy, History (2.3%); Science of Art such as: Art, Design, Dramatics, Music (1.0%); Mathematics and Natural Sciences (1.0%), and Others fields (8.8%) respectively.

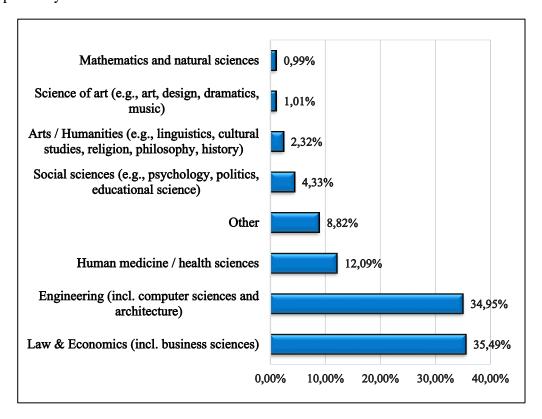


Figure 6. Fields of Study

#### 3. Career Choice Intentions and entrepreneurial intentions

#### 3.1 General Overview

One topic that was consulted in the survey was: which career path do you intend to pursue right after completion of your studies, and which career path 5 years after completion of studies? According to responses which can be observed the career choice intentions of students who wanted to be a founder after graduation represented 23.6%, meanwhile the portion of students who want to work in companies was 64.8% as shown in Table 2.

On the other hand, making comparisons with the opinions of students about career intentions after five years later of graduation, the portion of students who want to establish their own startup increased to 64.2%. Meanwhile, the portion of students who want to be an employee in five years decreased from 64.8% to 19.6%.

Table 4. Career choice intentions right after studies and 5 years after studies

		Ecuador		Inter	national
		Directly after studies	5 years after completion of studies	Directly after studies	5 years after completion of studies
	an employee in a small business (1-49 employees)	7,62%	1,53%	14,90%	3,40%
	an employee in a medium- sized business (50-249 employees)	11,30%	1,63%	20,30%	7,00%
Employee	an employee in a large business (250 or more employees)	26,95%	7,53%	23,80%	17,60%
	an employee in a non-profit organization	2,02%	2,24%	3,50%	3,00%
	an employee in Academia (academic career path)	3,87%	1,84%	6,90%	6,10%
	an employee in public service	13,01%	4,83%	10,90%	9,50%
Founder	a founder (entrepreneur) working in my own business	23,55%	64,19%	8,80%	38,20%
	a successor in my parents' / family's business	5,16%	4,99%	1,90%	2,40%
Successor	a successor in a business currently not controlled by my family	1,92%	4,79%	0,70%	2,50%
Other	Other / do not know yet	4,58%	6,42%	8,20%	10,30%

The figure 7 provides insights into the choice of career paths as an employee in the private sector, in the public sector, or in a non-profit organization that was reported in the survey. In the case of the career path as an employee, the size of companies could be distinguished where individuals would like being employed according to their sizes like small, medium-sized, or large firm. It is possible to contrast the period of intention depending on the period that students forecast continuing their career path after completion of their studies (blue bar) and 5 years after their studies (green bar).

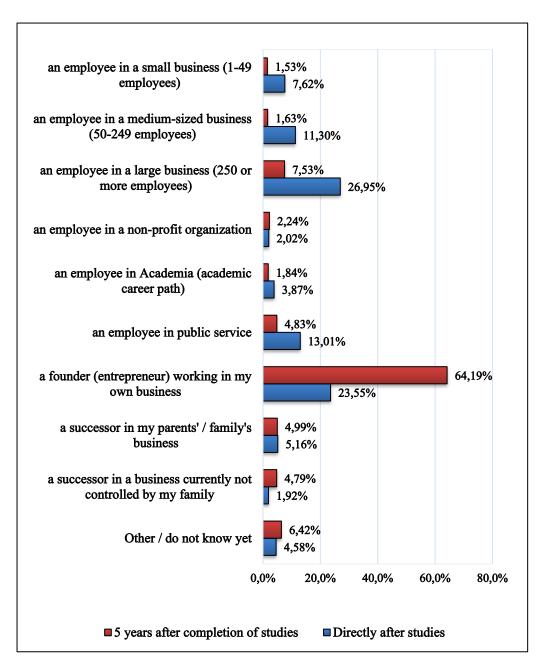


Figure 7. Career choice intentions in detail – Ecuador

It is pointed out that the intention of being employed in a large business conformed by 250 or more employees, is the most preferred intention reported by the individuals with 27% of intentions respectively. Meanwhile, the attractiveness of this option decreases significantly (7.5%) five years after completion of their studies. According to become academics, 1.8% of students reported they want to continue this career path five years after completion of their studies and 2.2% reported want to be employees in a non-profit organization in the same period.

The figure 8 indicates most of the individuals intend to take on the role of being an employee (64.8%) immediately after their studies. In contrast, most individuals report intentions to take on the role of being an entrepreneur (64.2%) 5 years after their graduation, as opposed to the intention of being an employee reported by most of the students after completion of their studies.

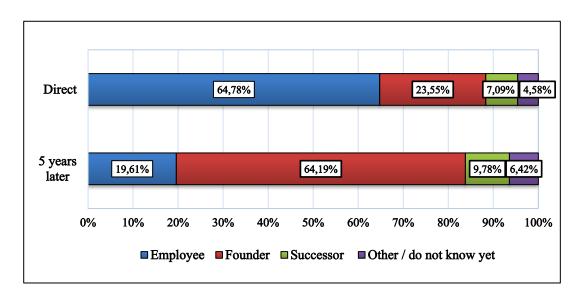


Figure 8. Career groups directly and 5 years after studies – Ecuador

#### 3.2 Entrepreneurial Intentions

Entrepreneurial intention can be defined as a conscious awareness and conviction by an individual that they intend to set up a new business venture and plan to do so in the future. Intention has been considered as the single most powerful predictor of entrepreneurial behavior (Liñán, Nabi, & Krueger, 2013).

Table 3 shows the comparison between male and female students future career choices, directly after their graduation and five years after graduation. As we can see, there are no deep differences between both gender about their preferences to be founders. Most of students want to be an employee after graduation: male (61%) and female (67%) respectively, while those of students who want to be founders are male (26%) and female (22%) directly after their studies.

Table 5. Career choice intentions right after studies and 5 years after studies by gender

	Ecuador					International			
	Directly after studies		completion of		Directly after studies		5 years after completion of studies		
	Male	Female	nale Male Female		Male Female		Male	Female	
Employee	61%	67%	21%	19%	78%	82%	45%	48%	
Founder	26%	22%	62%	65%	11%	7%	41%	36%	
Successor	8%	6%	10%	9%	3%	2%	5%	4%	
Other	4%	5%	6%	7%	7%	9%	9%	11%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	

Making comparison with international data, we observe on table 3 there are no differences in the proportion of international students, male (78%) and female students (82%), according to the fact of being employed immediately after their graduation. However, the portions of international students who want to be founders directly after studies are less than of students of Ecuadorian universities. The report lets us see that international female students are less interested in being founders with 7% meanwhile 11% of male students reported want to be founders.

On the other hand, the preference of a career path as a successor in the family firm or in a firm not owned by one's parents is 8% in male students and 6% in female. Meanwhile, the portions of students who want to be employees after 5 years of their graduation is 19% female and male 21%. The rate of individuals who want to be founders by gender increased, females from 22% to 65% and males from 26% to 62%.

Five years after graduation the portion of intentional founders is higher among males than females (41% versus 36%). In the same way, the preference of a career path as a successor is higher in students of Ecuadorian universities, male (10%) and female (9%) than international students, male (5%) and female (4%) respectively.

Figure 9 shows a remarkable difference between the rate that expresses the intention of race of the students international in relation with the local students. The results have reported than the intention to undertake of the students of Ecuadorian universities is greater than the intention reported by students in other universities. It can be observed that 64.2% of local students reported wanting to be entrepreneurs five years after completing their studies, as well as 23.6% of local students reported want to be founders of their own company immediately after graduation. However, the portion on international students who reported wants to be a founder 5 years later were 38.2%, meanwhile 8.8% reported be intentional founders directly after their studies.

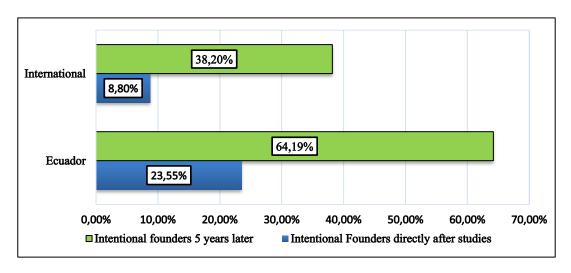


Figure 9. Share of intentional founders of Ecuador and International average

According the results showed before, the level of entrepreneurial intentions is remarkably higher five years after graduation. Therefore, the figure 10 clarifies that students who wants to be founders according the field of study they have selected. In this way, we reported the highest level of intention is observed among the students who were studying the following fields: Laws and Economy (68.7%), Science of Art

(66.3%), Engineering (64.8%). As for other fields, the higher levels of interest in founding a business were observed in the following careers: Arts and Humanities (57.9%), Social Sciences (56.6%), Human Medicine (55%), Mathematics and Natural Sciences (48.1%) respectively.

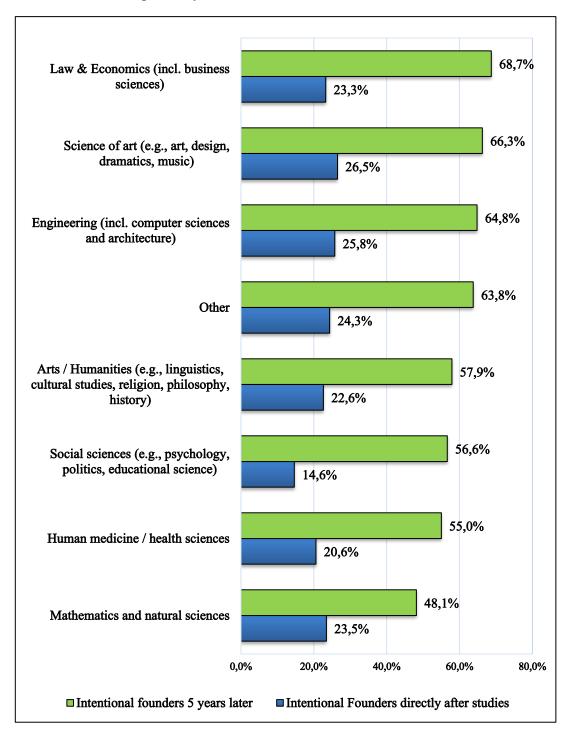


Figure 10. Entrepreneurial intentions depending on field of study – Ecuador

The following figure shows the intention of being founders of students which are studying careers like business, laws and economics. Students clearly preferred a career path as a founder (68.7%) five years after their studies. We identify the proportion of students of Ecuadorian universities as higher than intentions of international students (44.6%) who intend to found their own firm five years later their studies.

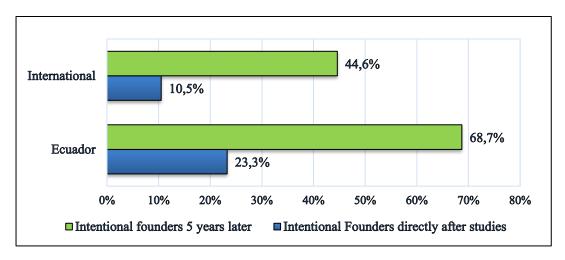


Figure 11. Intentional founders (LEBS students) 5 years after studies across countries

The Figure 12 indicates that female respondents (65.4%) are more entrepreneurial than male respondents (62.2%) when they were asked for their intentions of being intentional founders 5 years after their graduation. In contrast, male respondents (26%) are more entrepreneurial than female respondents directly after studies. However, the proportion of founders is higher in both genders when the fact refers to intentional founders 5 years later their graduation.

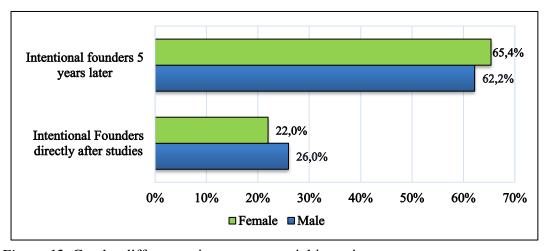


Figure 12. Gender differences in entrepreneurial intentions

The analysis by field of study and time horizon reveals that the share of intentional founders is often higher among females when we talk about intention of being founders 5 years after of their graduation (except in females whose careers are related to social sciences). However, making differences between genders about the intention to be entrepreneurs directly after studies, we observe that male respondents are more entrepreneurial than female respondents.

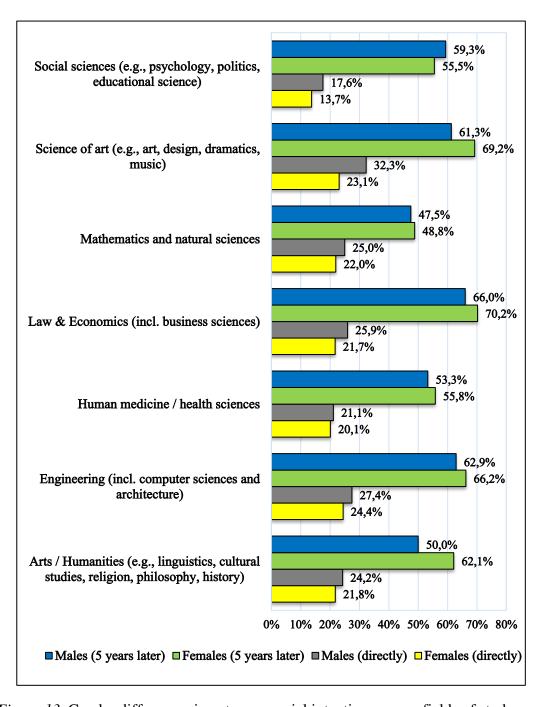


Figure 13. Gender differences in entrepreneurial intentions across fields of study

#### 3.3 Multi-item Entrepreneurial Intention

One of the main ideas of Ajzen's Theory is the difference between intentions and behaviors. If there is a serious entrepreneurial intention, it does not necessarily mean that the entrepreneurial activity will be pursued and an enterprise will be set up. Intentions depend on the attitudes towards behavior, subjective norms and the perceived behavioral control. Actual pursued activities cannot be expected without serious intentions (Liñán & Chen, 2009).

To account for entrepreneurial intentions, a question was used that asked students to indicate their level of agreement to several statements that capture their general intention to become an entrepreneur in the future (Liñán & Chen, 2009). The items are listed in the following table 4. Students were asked to indicate their level of agreement to six statements according to a Likert scale that measures the level of agreement from 1 that indicates strong disagreement with 7 that indicates a strong agreement. An aggregate entrepreneurial intention measure was generated by calculating the mean of all six answers that were anchored from 1 (strongly disagree) to 7 (strongly agree (Sieger, Fueglistaller, & Zellweger, 2014).

Table 6. Entrepreneurial intention, total average and difference between Agreements and Disagreements.

	Ave	erage	Differences Agree / Disagree		
Affirmation	Ecuador	International	Ecuador	International	
I am ready to do anything to be an entrepreneur.	5.7	3.9	74.9%	-0.6%	
My professional goal is to become an entrepreneur.	6.2	4.1	84.3%	6.6%	
I will make every effort to start and run my own business.	6.3	4.2	86.9%	10.1%	
I am determined to create a business in the future.	6.2	4.2	85.5%	10.2%	
I have very seriously thought of starting a business.	6.0	4.2	80.4%	10.9%	
I have the strong intention to start a business someday.	6.2	4.4	84.5%	13.9%	

This figure shows the level of agreement of each statement which varies to the intensity of the agreement. One bar which is more green shows a higher level of agreement in contrast to the red portion which shows the opposite effect.

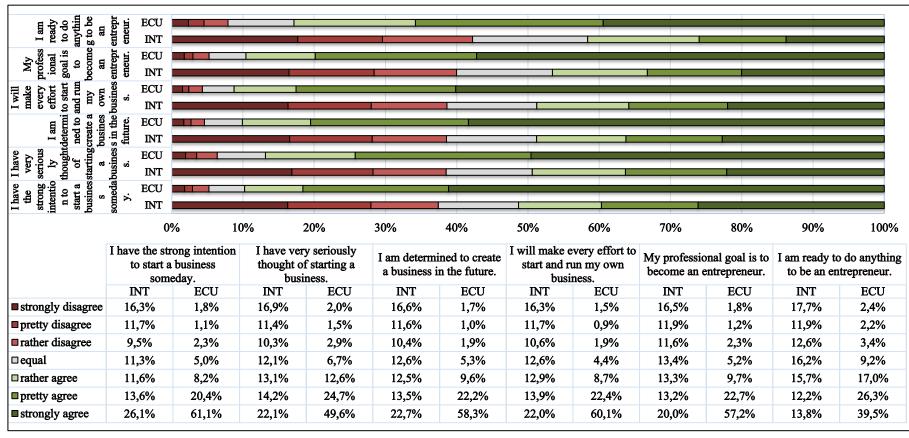


Figure 14. Entrepreneurial Intention

#### 4. Drivers of Entrepreneurial Intentions

#### **4.1 University Context**

Debackere and Veugelers (2005) mentioned that Universities can play an important role in identifying and developing entrepreneurial traits and inclinations among students and making them capable of starting their own venture, thus effectively contributing to economic prosperity and job creation. Kraaijebrink, Groen and Bos (2010) suggested that although universities can support entrepreneurship in many objectively measured ways, to understand the effect of such measures, it was crucial to gauge the extent to which they could have an impact on students. They proposed measuring students' perceptions of the University support that they receive (Saeed, Yousafzai, Yani-De-Soriano, & Muffat, 2015).

Previous research has suggested that certain university support policies and practices can help to develop entrepreneurial intentions such as: technological transfer offices and faculty consultants, university incubators and physical resources; and university venture funds (Lerner, 2005; Mian, 1996, 1997; Saeed, Yousafzai, Yani-De-Soriano, & Muffatto, 2015). An important element of the GUESSS research model is the role of the university. In this way, to examine the entrepreneurial climate that exists at the different universities, students were asked to indicate the extent to which they agree to the statements in the following figure (Luethje & Franke, 2004).

Table 7. Climate for Entrepreneurship, Total Average and Differences between agreements and disagreements

Affirmation	A	verage	Differences Agree / Disagree	
	Ecuador	International	Ecuador	International
The atmosphere at my university inspires me to develop ideas for new businesses.	4.9	4.1	43%	8%
There is a favorable climate for becoming an entrepreneur at my university.	4.9	4.2	45%	13%
At my university, students are encouraged to engage in entrepreneurial activities.	5.0	4.3	48%	15%

Answers ranged from 1 (not at all) to 7 (very much) The average of the answers is 5, which constitutes that students agree (rather agree). In the same way, we observe in table 5 the net balances of the total averages in the columns named as Agree/Disagree. Results let us observe that the impact of university environment in Ecuador is almost five times that of international universities (43% Ecuador, 8% International).

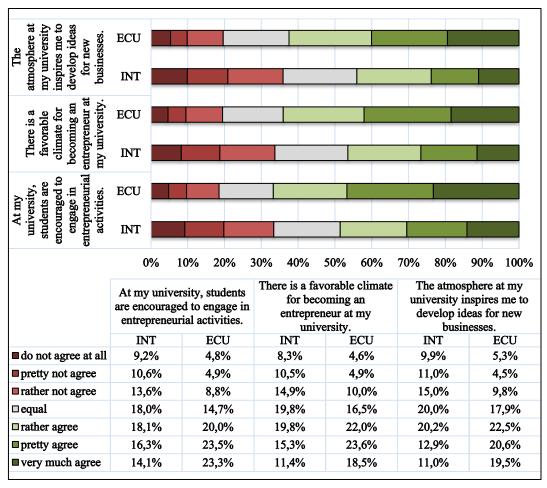


Figure 15. Climate for Entrepreneurship

Souitaris, Zerbinati and Al-Laham (2007) mentioned that the entrepreneurship education is a concept broader than a course, which includes four components such as:
(a) a taught component, with one or more modules; (b) a business planning component, which can include business plan competitions and advice on developing a specific business idea; (c) an interaction with a practice component, which includes talks from practitioners and networking events; (d) a university support component, which can include market-research resources, space for meetings, even seed funding to student-teams, and a pool of technology with commercial potential (p. 568).

Consequently, we asked the students to what extent they have been attending related courses and offerings which refer to entrepreneurship. As the following figure shows, 6.4% of all students are studying in a program specifically dedicated to entrepreneurship. While 46.9% of our respondents did not attend any entrepreneurship-related course at all. Around every fifth student, however, has attended an entrepreneurship course as a compulsory or elective course (multiple answers were possible).

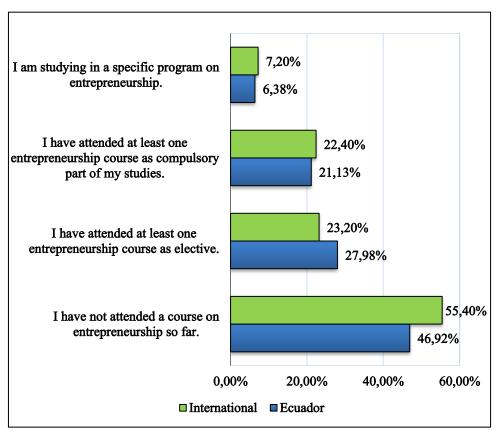


Figure 16. Attendance of entrepreneurship offerings

According with Lima, Lopes, Nassif, and Silva (2014), students will be more likely to become entrepreneurs if they study in universities which provide entrepreneurship education. They recognized it as important that universities promote entrepreneurship education and engage in developing entrepreneurial potential. we examine the entrepreneurial climate that exists at the different universities.

We examine the portion of students that are intentional founders and have taken courses or programs which refer to entrepreneurship and we observe that students of Ecuadorian universities (61.7%) show a higher portion than international students (49.4%).

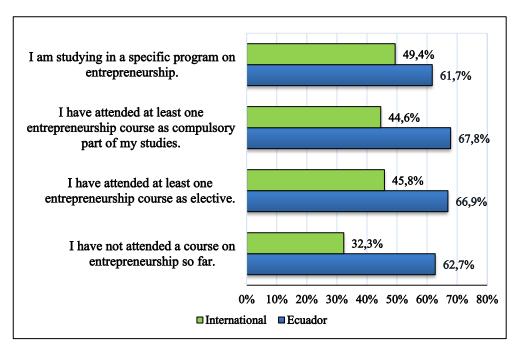


Figure 17. Share of Intentional Founders (5 years after studies) depending on entrepreneurship education

Entrepreneurship education has been an opportunity because it is a building driver which contribute to favoring the creation of a business venture through a set of formalized teachings that informs, trains, and educates anyone interested in business creation. Jones and English (2004) mentioned that nowadays has been proposed a mix for action-oriented teaching which encourages experiential learning, problem solving, project-based learning, creativity, and is supportive of peer evaluation. The goal of this focus is to provide enterprising skills and behavior (Küttim, Kallaste, Venesaar, & Kiis, 2014).

The students were asked to indicate their level of agreement with specified elements on a seven- point scale ranging from 1, not at all; to 7 that means very much. The level of agreement was measured with five statements about learning progress during university students' studies. Table 6 shows the global average of the level of agreement about entrepreneurial learning assessments. According to results the average

is 5.0, and the distribution of the different agreement levels looks pretty similar as with the entrepreneurial climate question.

Table 8. Entrepreneurial Learning Assessments, Total Average and Differences between Agreements and Disagreements

Affirmation	Average		Differences Agree / Disagree	
	Ecuador	International	Ecuador	International
increased my understanding of				
the attitudes, values and	5.1	4.3	57%	18%
motivations of entrepreneurs.				
increased my understanding of the actions someone has to take to start a business.	5.1	4.1	56%	7%
enhanced my ability to develop networks.	4.8	4.3	41%	18%
enhanced my practical management skills in order to start a business.	5.1	4.1	54%	8%
enhanced my ability to identify an opportunity.	5.3	4.4	61%	24%

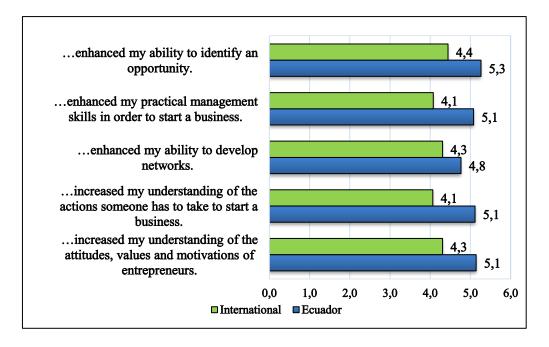


Figure 18. Entrepreneurial Learning Assessments

To report the results GUESSS is not only interested in students' attendance of entrepreneurship classes and in their perceptions regarding the entrepreneurial climate at their university, but also in how much they have been learning at their university regarding entrepreneurship. The higher average was mentioned to the statement that

affirms the students of Ecuadorian Universities recognized the entrepreneurial learning helps them because it enhanced their ability to identify an opportunity (5.3).

# **4.2** Entrepreneurial skills (Locus of control, Attitude, and Entrepreneurial Self-efficacy)

#### 4.2.1 Locus of Control

The concept of perceived behavioral control is comprised of two components: self-efficacy and controllability as a locus of control variable. The literature has evidenced that self-efficacy expectations do not necessarily correspond to beliefs about internal control factors, and controllability expectations have no necessary basis in the perceived operation of external factors. However, both variables reflect beliefs about the presence of internal as well as external factors (Ajzen, 2002).

Locus of control is a generalized construct that refers to individuals' overall belief in the power of their own actions belief in the power of their own actions across a variety of situations, while self-efficacy refers to an individual's self-confidence in specific tasks and situations (Boyd & Vozikis, 1994). The questionnaire asked students about the level of agreement or disagreement using statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Table 9. Locus of Control, Total Average and Differences between Agreements and Disagreements

Affirmation	Average		Differences Agree / Disagree	
	Ecuador	International	Ecuador	International
I am usually able to protect my personal interests.	6.1	5.5	89%	72%
When I make plans, I am almost certain to make them work.	6.0	5.4	90%	69%
I can pretty much determine what will happen in my life.	6.0	5.0	85%	51%

In according responses, the locus of control measurement was calculated as a mean of all three statements. As we can see the following figures shows that locus of control of students of Ecuadorian universities is higher than international students.

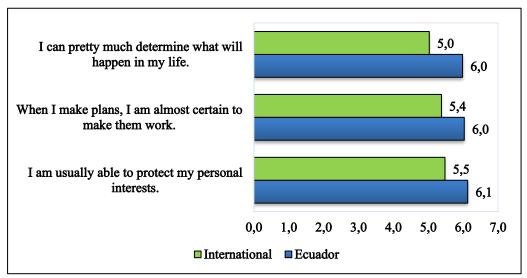


Figure 19. Internal Locus of Control

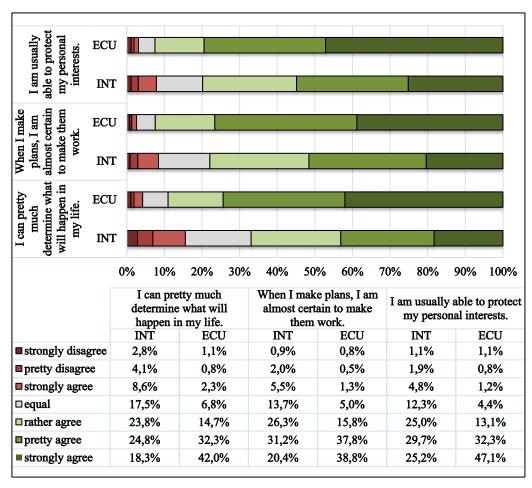


Figure 20. Locus of Control

#### 4.2.2 Self-Efficacy and Entrepreneurial Abilities

Bandura (1982) also defined self-efficacy as the conviction that one can successfully execute the desired behavior required to produce an outcome. It has also been described as people's judgment regarding their ability to perform a given activity (Bandura, 1977; 1982; 1986). Bandura (1997, 1999) mentioned that individual's beliefs about his or her competencies and to utilize such competencies in accomplishing a given task and situations are anchored on self-efficacy (Oyeku et al., 2014).

Students were asked to indicate their level of competence in performing several different entrepreneurship-related tasks from 1 that means very low competence to 7 that means very high competence. Results showed that on average students at Ecuadorian universities felt more confident than international students. In Ecuador, students mentioned that they felt most confident about being a leader and a communicator (5.9) and least confident about creating new products and services (5.4).

Table 10. Self-Efficacy and Entrepreneurial Abilities, Average and Differences between Agreements and Disagreements

Affirmation	A	verage	Differences Agree / Disagree	
	Ecuador	International	Ecuador	International
Identifying new business opportunities	5,6	4,4	77%	24%
Creating new products and services	5,4	4,3	71%	20%
Managing innovation within a firm	5,6	4,5	78%	30%
Being a leader and communicator	5,9	5,1	83%	53%
Building up a professional network	5,5	4,6	72%	34%
Commercializing a new idea or development	5,7	4,6	79%	33%
Successfully managing a business	5,5	4,7	72%	35%

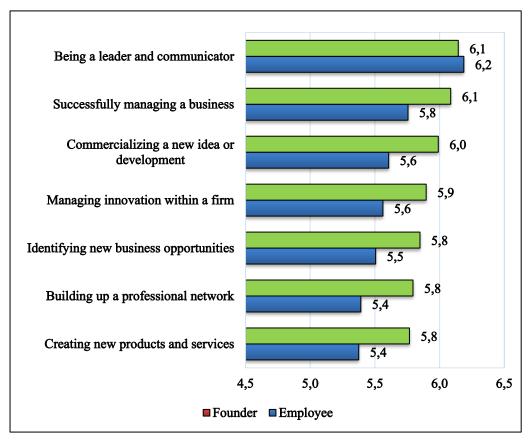


Figure 21. Skills among intentional founders and intentional employees (1-7 scale)

## 4.2.3 Entrepreneurial Attitude

The theory of planned behavior has emerged as one the most influential and popular conceptual frameworks for the study of human action. According to the theory, human behavior is guided by three kinds of considerations: attitude toward the behavior; subjective norm; and control beliefs result give rise to perceived behavioral control. In combination, these drivers lead to the formation of a behavioral intention (Ajzen, 2002).

The variable related with attitude toward a start-up measure the intensity of agreement with which individuals hold a positive or negative personal valuation about being an entrepreneur. It considers not only positive reasons but also disadvantages of this decision for a career path (Ajzen, 2001; Autio et al., 2001; Kolvereid, 1996; Liñán & Chen, 2009).

Table 11. Entrepreneurial Attitude, Total Average and Differences between Agreements and Disagreements

Affirmation	A	verage	Differences Agree / Disagree	
7 Mill mation	Ecuador	International	Ecuador	International
Being an entrepreneur implies more advantages than disadvantages to me.	6,0	4,7	85%	32%
A career as entrepreneur is attractive for me.	5,9	4,7	81%	32%
If I had the opportunity and resources, I would become an entrepreneur.	6,1	5,1	85%	45%
Being an entrepreneur would entail great satisfactions for me.	6,1	4,8	86%	36%
Among various options, I would rather become an entrepreneur.	5,8	4,4	77%	17%

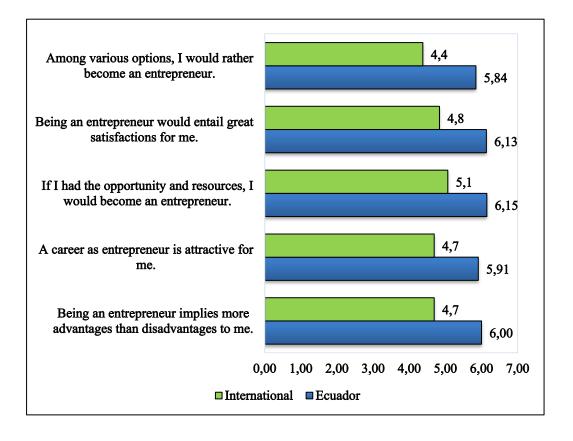


Figure 22. Entrepreneurial Attitude

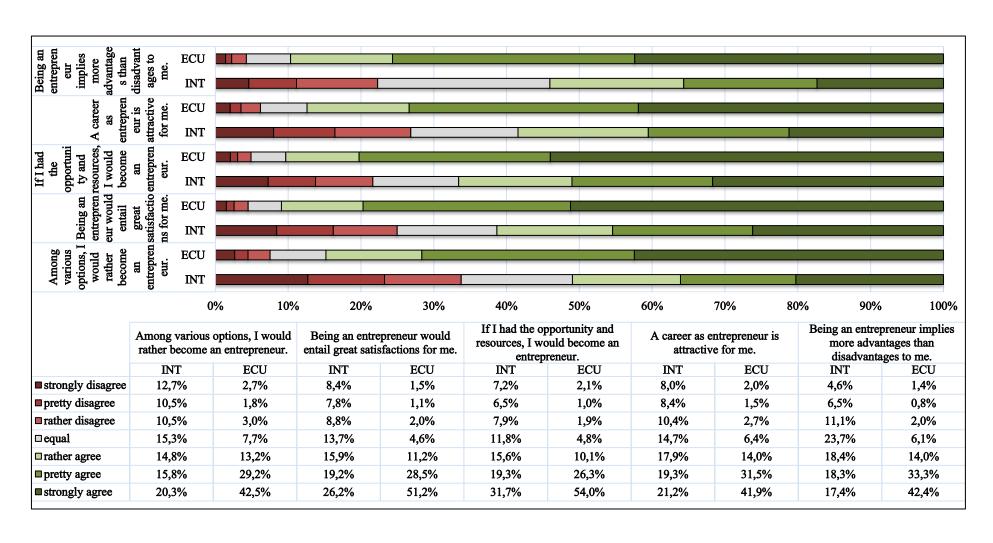


Figure 23. Entrepreneurial Attitude

#### 4.3 Motives to be a Founder

Another determinant of career choice intentions in general and entrepreneurial intentions are career motives. Hence, the research examined how students assess importance of different motives when they decide about their future career path (Sieger et al., 2014). To obtain further insight into the motives that are relevant to students' career choice intentions across Ecuadorian universities on a general level, GUESSS project asked them how important different motives are for their future work and career path (1=very unimportant, 7=very important). The following table shows the findings on the national report from Ecuador.

Table 12. Motivations and Goals to start the company

	A	verage	Differences Agree / Disagree	
Affirmation	Ecuador	International	Ecuador	International
to make money and become rich.	5.1	4.8	54%	42%
to mainly achieve financial success.	5.9	5.3	81%	60%
to advance my career in the business world.	6.2	5.6	88%	71%
to be able to signal my capabilities to others (i.e., future employers, colleagues).	6.2	5.3	87%	58%
to solve a specific problem for a group of people that I strongly identify with (e.g., friends, colleagues, club, community).	6.0	5.2	82%	54%
to play a proactive role in shaping the activities of a group of people that I strongly identify with (e.g., friends, colleagues, club, community).	5.8	5.1	82%	54%
to solve a societal problem that private businesses usually fail to address (e.g., social injustice, environmental protection).	5.9	5.1	82%	47%
to do something that allows me to enact values which are core to who I am.	6.1	5.7	88%	74%
to play a proactive role in changing how the world operates.	6.1	5.5	86%	66%

Results showed that according with averages of students' opinions, two important motives to start the company in Ecuador are to advance students' career in the business world (6.2) and to be able to signal capabilities to others. While international students consider one important goal and motive to start a company is to do something that allows them to enact values which are core to who they are (5.7).

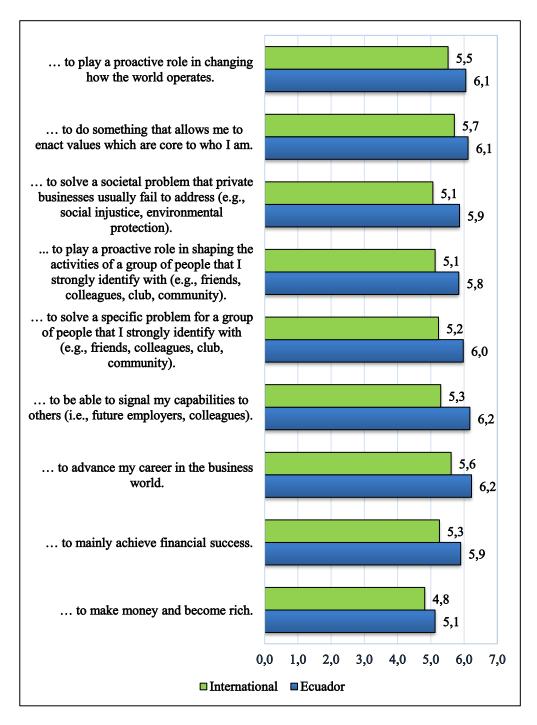


Figure 24. Motivations and Goals

#### **4.4 Context Reaction**

Social support is the perception or experience that one is loved, cared for by others, valued and part of a mutually supportive social network (Taylor, 2011; Wills, 1991). Research suggests that social support provided by family members is critical to start-up persistence on entrepreneurs. For example, parents assist younger generation family entrepreneurs by using their own connections (Edelman, Manolova, Shirokova, & Tsukanova, 2016).

Hence, GUESSS project investigates the social pressure that is exerted by individuals' immediate environment drawing on the concept of subjective norm from the theory of planned behavior proposed by Ajzen (1991) which captures the reaction that individuals expect from close peers if a certain behavior is executed. Theory postulates that the more positive the expected reaction is, the more likely it is that actual intentions to perform the behavior under consideration are formed (Sieger et al., 2014).

The questionnaire asked students how different people in their environment would react if they would pursue a career as an entrepreneur. The people or groups of people were close family members, friends, and fellow students. The responses were anchored at 1 (very negatively) and 7 (very positively) (Liñán & Chen, 2009). The following figure reports the mean values of Ecuador in comparison with international data. The results in Table 10 show that students were perceived to be more encouraged by their close family (6.4).

Table 13. Context reaction, total average and differences between Agreements and Disagreements

Affirmation	Av	erage	Differences Agree / Disagree	
Annination	Ecuador	International	Ecuador	International
Reaction: Your close family	6,4	5,7	89%	69%
Reaction: Your friends	6,1	5,7	87%	76%
Reaction: Your fellow students	6,0	5,5	84%	67%

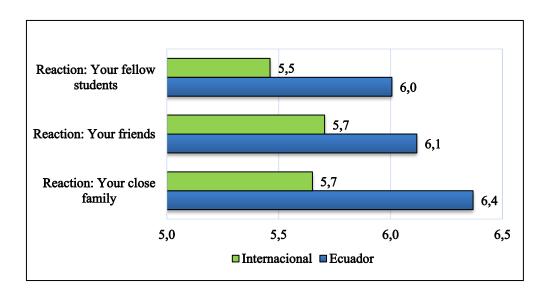


Figure 25. Context Reaction

### 4.5 Family Background

Bae, Qian, Miao, & Fiet (2014) mentioned that entrepreneurial family background refers to those people whose parents or family members are involved in self-employment. There are some evidences in entrepreneurship literature that have suggested parental experience may influence their children's entrepreneurial intentions and behavior, so the parents give them a head start in terms of moving from intentions to actions in contrast to others students who also exhibit desire to become entrepreneurs but do not have resources derived of having a family business background (Shirokova, Osiyevskyy, & Bogatyreva, 2016).

Table 14. Family Background

Family Background		Are your parents self- employed?		e your jority owners usiness?
2 uongrounu	Ecuador	International	Ecuador	International
No	38%	64%	83%	81%
Yes, father	22%	17%	8%	11%
Yes, mother	12%	7%	3%	3%
Yes, both	27%	12%	6%	5%
Total	100%	100%	100%	100%

We asked the students if their father, mother, or both are currently self-employed. Most of the students reported that their mother, or father, or in some cases both are self-employed (61%). Almost 17% of respondents indicate that parents are majority owners of a business. Reviewing table 12, we can see that 28% of students in Ecuador reported that 100% is the ownership sharing in the hands of their family, in contrast, 52% of international students responded the same share of property.

Table 15. What is the ownership sharing that is in the hands of your family?

Ownership Percentage	Ecuador	International
0-25%	29%	17%
26-50%	24%	15%
51-99%	18%	16%
100%	28%	52%
Total	100%	100%

#### 4.6 The Society as a whole

Stephan (2008) mentioned that culture influenced entrepreneurship in two main ways. The first way suggests that if a country has more individuals with entrepreneurial values and trait, more individuals will become entrepreneurs, a view that suggests values are aggregated. The second way suggests that a higher level of moral entrepreneurship within a culture is reflected in that society's practices (Krueger, Nabi, & Liñán, 2014).

Culture can be defined as a set of shared beliefs, values and expectations (Hayton, George, & Zahra, 2002). Therefore, participants were asked how different people in their environment would react if they decided to become entrepreneurs. Responses ranged from 1 that means very negative to 7 that means very positive (Liñán & Chen, 2009). The results indicate that students in Ecuador thinks their parents take pride in the individual accomplishments of their children. In general, the level of agreement about the statements that reflect the society environment in Ecuador is higher than in the rest of world.

Table 16. The Society as a whole

Affirmation	A	Average		Differences Agree / Disagree	
	Ecuador	International	Ecuador	International	
In my society, children take pride in the individual accomplishments of their parents.	6.1	5.5	86%	66%	
In my society, parents take pride in the individual accomplishments of their children.	6.4	6.0	92%	84%	
In my society, aging parents generally live at home with their children.	5.4	4.1	64%	5%	
In my society, children generally live at home with their parents until they get married.	5.7	4.4	72%	18%	
In my society, orderliness and consistency are stressed, even at the expense of experimentation and innovation.	5.1	4.5	61%	29%	
In my society, most people lead highly structured lives with few unexpected events.	5.0	4.5	53%	29%	
In my society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do.	5.1	4.3	58%	19%	
In my society, individuals are encouraged to strive for continuously improved performance.	5.3	4.5	63%	28%	

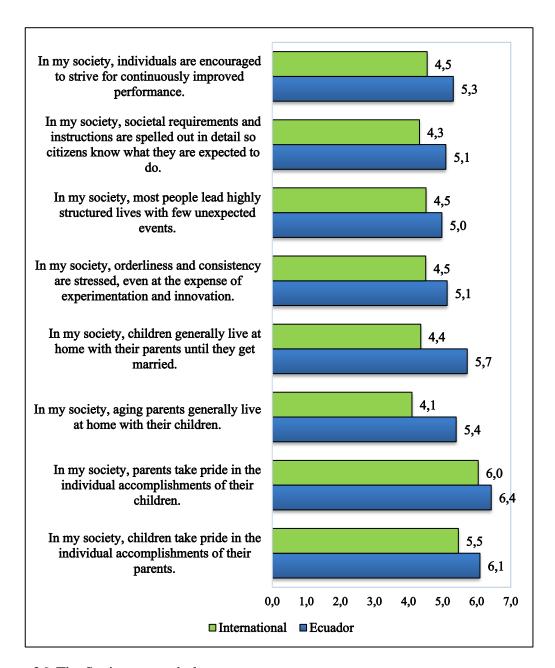


Figure 26. The Society as a whole

# **5. Share of Nascent and Active Entrepreneurs**

The research distinguishes the definitions of emerging entrepreneurs from active entrepreneurs. The nascent entrepreneurs are those students who are in the process of creating a business while the active entrepreneurs are those who already have their own business. To identify active entrepreneurs, the students were asked if they are currently trying to start your own business or in contrast they plan to become self-employed. Also, it was asked if students Are currently operating or managing their own business or

they already are self-employed. The last one question was used to identify active entrepreneurs.

In Ecuador, nascent entrepreneurs total 2.737 students that answered with "yes" (33.3%) and can thus be classified as so-called nascent entrepreneurs. Globally, 5.474 students are nascent entrepreneurs which represent 21.90%. Nascent entrepreneurs in Ecuador sample represented majority individuals with an average age between 25 and 30 years (26%), and are male (24.10%).

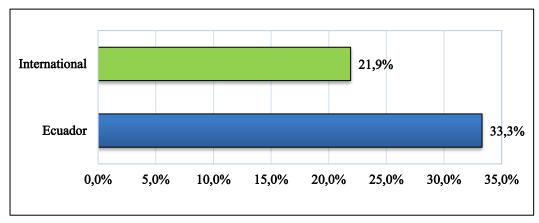


Figure 27. Share of Nascent Entrepreneurs

In contrast, active entrepreneurs in the sample of Ecuador are students who answered they are already running their own business, that means they are already self-employed. In Ecuador, 17.50% of students are already entrepreneurs (1.440 students), while globally 8.8% consequently. Most of active entrepreneurs are male (21.2%) and are over 31 years (37%).

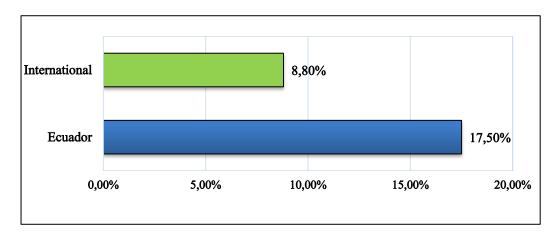


Figure 28. Share of Active Entrepreneurs

### **5.1 Nascent Entrepreneurs**

### **5.1.1** Characteristics of Nascent Entrepreneurs

Respondents were asked in how many months they plan to found their business. Almost half of the nascent entrepreneurs would like to start their business within periods of 19 months to two years both in the Ecuador and the international sample. The results can be found in the figures below that shows the majority represented 47.4% of students who want to establish their startup after 19 and 24 months, or more.

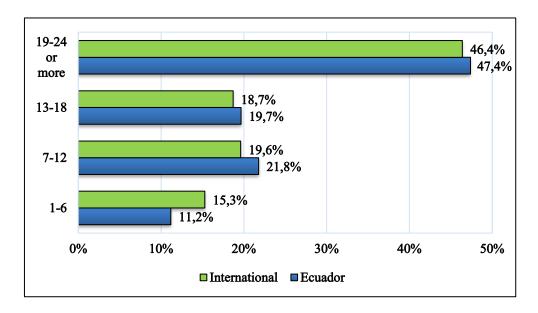


Figure 29. Time horizon of completing business creation (in months) Ecuador and International average

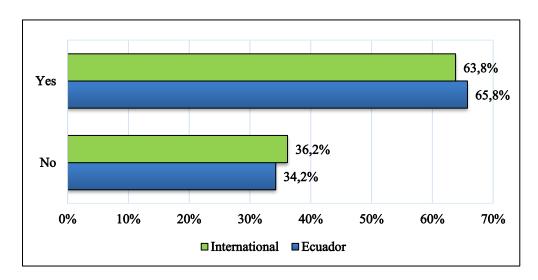


Figure 30. Business as the main occupation after graduation

Nascent entrepreneurs were also asked about the sector in which their company would be active. The most preferred industry sectors of the nascent founders among students for their start-up are related to trade referring to wholesale and retail businesses (21.3%). The least preferred industry sectors are construction with 1.7%. More details are given in the figure below.

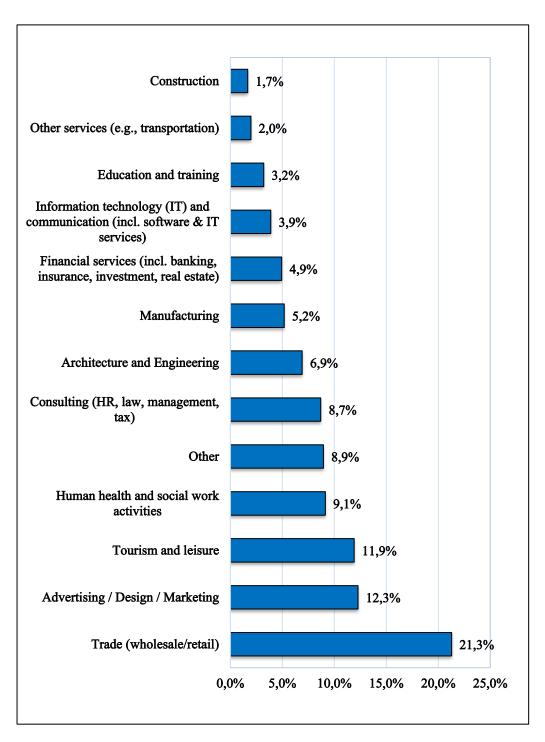


Figure 31. Industrial Sector Planned of New Ventures

In the next table, we distinguish nascent entrepreneurs according to gender. In this way, the most preferred industry sectors for both genders in order to be founders of their start-up are related to trade referring to wholesale and retail businesses (22.9% male, 19.7% female).

Table 17. Industry sectors of planned new ventures, by Gender

Industry		Ecuador		International		
Sectors	Male	Female	Total	Male	Female	Total
Advertising / Design / Marketing	10.3%	14.0%	12.3%	9.4%	13.4%	11.3%
Architecture and Engineering	7.4%	6.6%	6.9%	9.1%	5.0%	7.1%
Construction	2.4%	1.0%	1.7%	3.7%	1.8%	2.8%
Consulting (HR, law, management, tax)	6.6%	10.6%	8.7%	6.5%	8.6%	7.5%
Education and training	2.7%	3.7%	3.2%	4.4%	7.3%	5.8%
Financial services (incl. banking, insurance, investment, real estate)	3.6%	6.1%	4.9%	4.9%	5.3%	5.1%
Human health and social work activities	9.1%	9.1%	9.1%	4.5%	8.1%	6.2%
Information technology (IT) and communication (incl. software & IT services)	6.1%	2.0%	3.9%	15.6%	4.2%	10.2%
Manufacturing	5.1%	5.3%	5.2%	7.3%	5.6%	6.5%
Tourism and leisure	11.9%	12.0%	11.9%	6.7%	10.5%	8.5%
Trade (wholesale/retail)	22.9%	19.7%	21.3%	13.2%	14.3%	13.7%
Other services (e.g., transportation)	2.3%	1.7%	2.0%	4.2%	3.3%	3.8%
Other	9.8%	8.3%	8.9%	10.4%	12.5%	11.4%
Total	100%	100%	100%	100%	100%	100%

In this regard, the students who have been characterized as nascent entrepreneurs were asked to indicate which gestation activities they had already performed. Responses indicated that major gestation activities were done to gather information about markets or competitors (40.0%), writing a business plan (35.3%) and discussing product or business ideas with potential customers (30.0%).

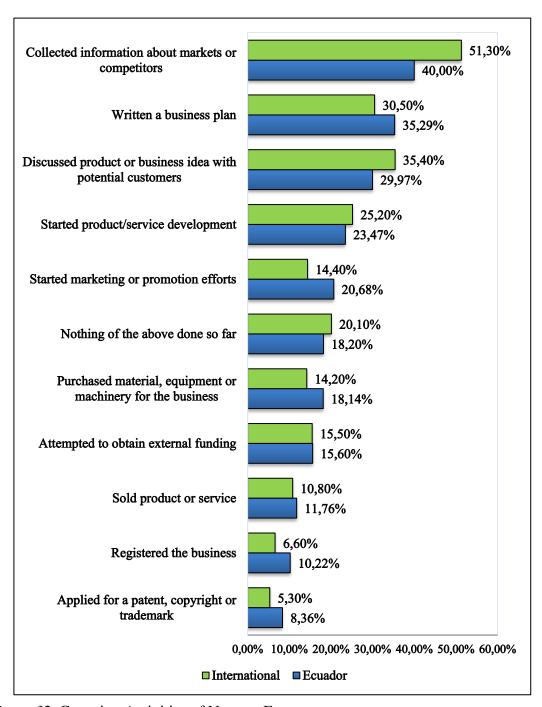


Figure 32. Gestation Activities of Nascent Entrepreneurs

Also, nascent entrepreneurs were asked about how much equity they expected to have in their new business, most of them which represent 34% of respondents say they would like to own between a 51% and 75% ownership share of the planned firm's equity.

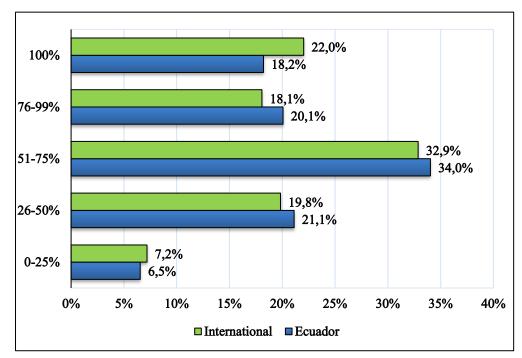


Figure 33. Ownership share in the new business

Most of the students would like to found their company with one or two cofounders (34.7%). Similar results can be found for the international sample, because 28% of international nascent entrepreneurs say that they intend to found their company with two co-founders.

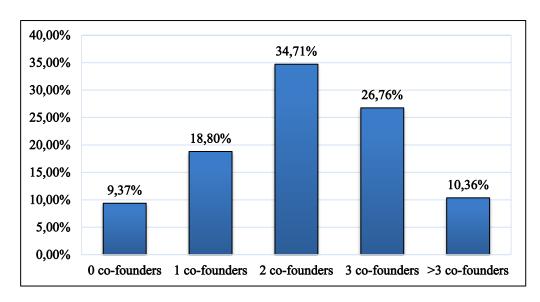


Figure 34. Number of planned co-founders Ecuador

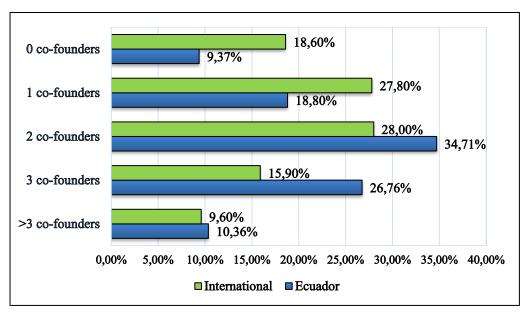


Figure 35. Number of planned co-founders

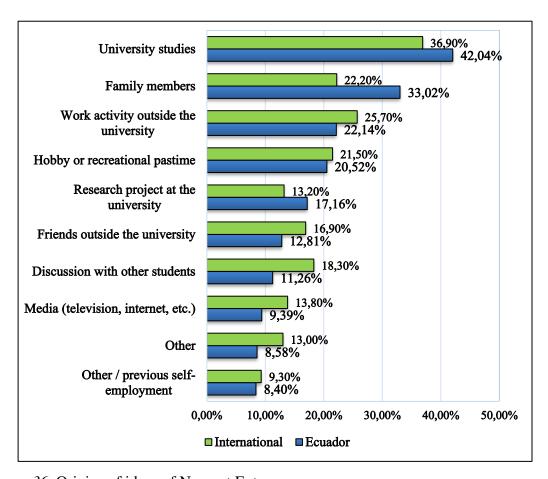


Figure 36. Origins of ideas of Nascent Entrepreneurs

Finally, most students who are named as nascent entrepreneurs say that their ideas about new startups come from university studies (42%), family members (33%) and from work activity outside in the University (22.1%) in mainly way.

## **6. Actives Entrepreneurs**

## **6.1 Characteristics of Active Entrepreneurs**

Active entrepreneurs in our sample have a mean age over 31 years of age (37%) which is higher than the mean age of nascent entrepreneurs. Most active entrepreneurs are male (21.2%). Students were asked about the year in which they founded their business. As the following figure shows, most of the firms in Ecuadorian sample have been created in recently years, 24% in 2015 and 32% in 2016.

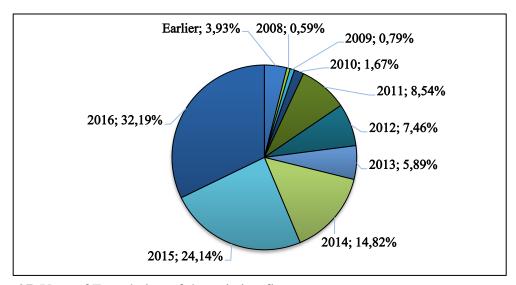


Figure 37. Year of Foundation of the existing firms

Looking at the international data, most of the businesses have been also created in 2016 (25%).

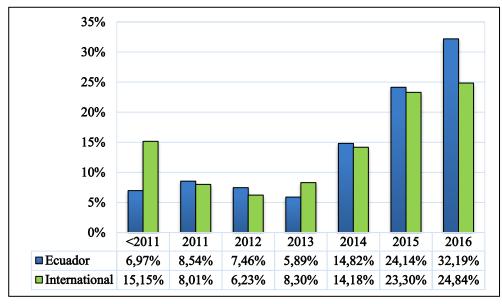


Figure 38. Year of Foundation of the existing firms

While 34.7% of the nascent entrepreneurs indicated that they want to create their business two co-founders, 31% of the active entrepreneurs have created the firm with two partners.

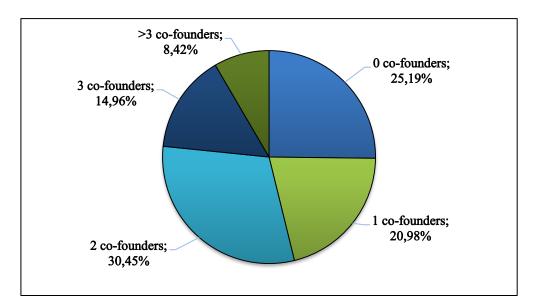


Figure 39. Number of co-founders among Active Entrepreneurs

The international results show that 28.7% of the active entrepreneurs have created the firm without co-founders (Sieger et al., 2016).

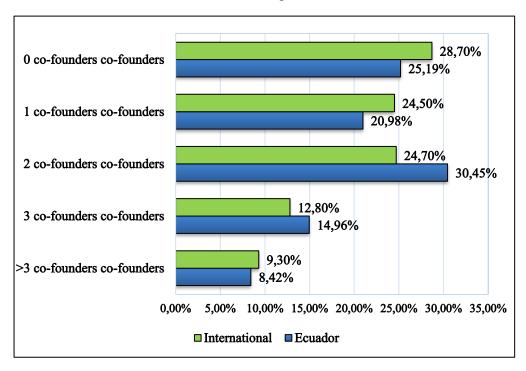


Figure 40. Number of co-founders among Active Entrepreneurs Ecuador and International average

The mean number of employees that active entrepreneurs in our sample mentioned is one employee (29.3%). This result may be understood as the consequence of students beginning their own start-ups instead of being employees.

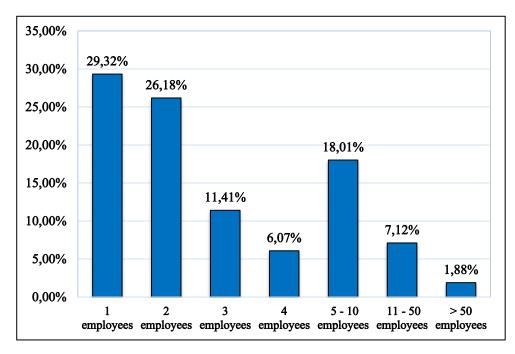


Figure 41. Number of employees of Active Firms

Active entrepreneurs were asked about how much equity they expected to have in their new business, most of them which represent 34% of all respondents say would like to own around 25% ownership share of the planned firm's equity.

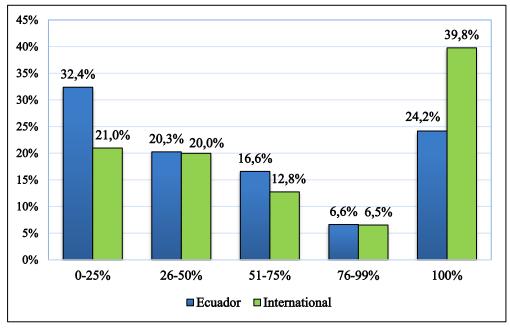


Figure 42. Ownership share of Active Firms

Active entrepreneurs were asked about the industry sector in which their company is mainly active. In Ecuador, activities related with trade come first (26%), More details about the Ecuadorian sample are given in the figure below.

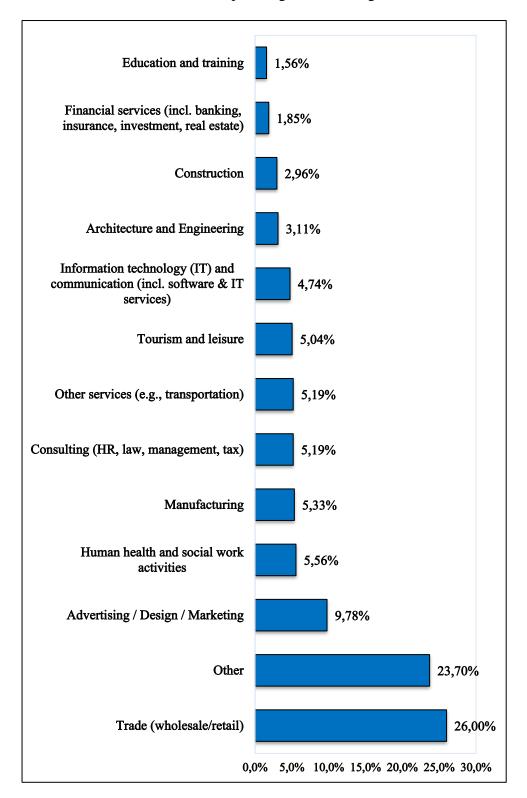


Figure 43. Industry Sectors of Active Firms

Finally, active entrepreneurs were asked about their level of satisfaction with self-employment. This index was obtained by the mean of the level of agreement with some statements related with the fact of being satisfied as entrepreneurs with their life as an entrepreneur. The level of agreement or disagreement was captured from 1 that means not at all and 7 that means very much.

The statements were asked are: (a) I am satisfied with my entrepreneurial career, (b) overall, I am very satisfied with my business, (c) I would be willing to start the same business again, and finally, (d) All things considered, I am satisfied with my life as an entrepreneur (Sieger, Fueglistaller, & Zellweger, 2016). In figure 45 we show an aggregated satisfaction index which shows the level of satisfaction about being self-employed. The Ecuadorian sample indicates the maximum level of satisfaction exactly with 7 points. Followed by 26.4% of entrepreneurs who said they were satisfied with being self-employed.

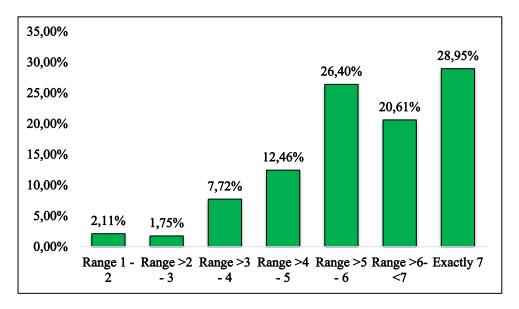


Figure 44. Satisfaction of Active Entrepreneurs in ranges

#### 7. Conclusions and Recommendations

The Global University Entrepreneurial Spirit Students' Survey (GUESSS) is a global research project whose main objective is to assess the entrepreneurial intention and activity of students. The project started in 2.003 and data collection is carried out every two years. The 7th data collection wave was conducted in Spring/Summer 2016 in 50 countries, at more than 1,000 universities, and generated more than 122,000 completed responses (Dawson, 2016; Durst & Sedenka, 2016).

The following are the key findings of the National Report from the first edition in Ecuador.

- Ecuadorian students who participated were 8,211 students of which 97.6% are undergraduates, while 2.4% are studying a fourth-level study program (master degree, PhD., and others).
- Based on the findings, it was possible to identify that 23.6% of students said that they wanted to be founders of their own company immediately after completing their studies, while in the same period, 64.8% of the sample of students identified that they want to be employees. Most of them want to belong to a large company represented by 250 employees or more (27%).
- At a medium term, that represents a period of 5 years after finishing a student career, the intentions of the students to be an entrepreneur represent 64.2% while that of being employed is 19.6%. Therefore, it can be concluded that the great majority of students showed intentions to be founding entrepreneurs after 5 years of finishing their career, having gained experience collaborating in companies of third parties as employees.
- On the other hand, as far as the gender gap is concerned, there are no deep gender differences in the intention to be founders of their own enterprise.
- In Ecuador, 6.4% of individuals who are enrolled in universities are in student programs specifically dedicated to subjects related to entrepreneurship, while 46.9% answered not having attended courses related to entrepreneurship. When segmenting only those students who intend to undertake after 5 years of

- completing their studies, it was observed that 61.7% of them reported having taken courses in entrepreneurship.
- As for the perception of abilities shown by the university students of Ecuador and it was observed that the students have self-confidence regarding the activities around the fact of undertaking as well as their skills and abilities.
- Among the main reasons that lead students to want to undertake is the fact of
  wanting to advance with the exercise of their career in the business world and
  the fact to show their skills to others such as future entrepreneurs, entrepreneurs,
  colleagues.
- For students, the support of the family context is very important, and they
  perceive that in Ecuadorian society parents are proud of achievements
  accomplished by their children.
- The study identified between two categories of entrepreneurs who are nascent and active. The nascent ones are those who are currently in the process of creating companies and the active entrepreneurs who are those who are currently running their own company or come from a family business.
- In Ecuador, 33.3% are nascent entrepreneurs and oscillate mostly between 25 and 30 years (24.10%). While active entrepreneurs represent 17.50%, which exceeds the global proportion of international students (8.8%). Most active entrepreneurs are over 31 years (37%).
- University students in Ecuador identified that among the most attractive sectors to undertake are businesses related to the wholesale of products or sales through retail.

Finally, the students showed a high level of satisfaction about the fact of being entrepreneurs, which leaves an opportunity for the field of research to generate publication spaces that analyze each one of the factors that promote the entrepreneurial spirit of university students. The present report generates future lines of research related to the central topic, which example, analyze in deep ways some factors such as role models, university environment, comparisons between similar regions to find similar drivers that lead to promote the business intention of students.

It is also important to highlight that the university context represents a relevant element that contributes to the generation of this entrepreneurial spirit. The creation of training programs, seminars with people related to the topic of entrepreneurship, business tables, workshops, highlight role models which serves students in benchmarking that helps students make comparisons and provide the sequence they need to be founders in the Ecuadorian society. These are some ideas which will simulate the process of startups in medium term.

#### 8. References

- Ajzen, I. (1988). Attitudes, personality, and behavior. Chicago, IL: Dorsey.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52, 27–58.
- Ajzen, I. (2002). Perceived behavioral control, Self-Efficacy, locus of control, and the theory of planned Behavior1. *Journal of applied social psychology*, 32(4), 665-683.
- Ajzen, I. (2006). Constructing a Theory of Planned Behavior Questionnaire Brief Description of the Theory of Planned Behavior.

  http://people.umass.edu/aizen/pdf/tpb.measurement.pdf
- Amos, A., & Alex, K. (2014). Theory of planned behaviour, contextual elements, demographic factors and entrepreneurial intentions of students in Kenya. *European journal of Business and Management*, 6(15), 167-175.
- Autio, E., Keeley, R., Klofsten, M., Parker, G., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145–160.
- Bae, T., Qian, S., Miao, C., & Fiet, J. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: a meta-analytic review.

  \*Entrepreneurship Theory & Practice, 38(2), 217e254.
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American* psychologist, 37(2), 122.
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of social and clinical psychology*, 4(3), 359-373.
- Bandura, A. (1997). Self-efficacy: The Exercise of Control. New York: Freeman
- Bandura, A. (1999). Social cognitive theory of personality. *Handbook of personality: Theory and research*, 154-196.
- Boyd, N., & Vozikis, G. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 18, 63-63.

- Dawson, A., (2016) *Student Entrepreneurship at the John Molson School of Business*.

  Montreal: John Molson School of Business, Concordia University.
- Debackere, K., & Veugelers, R. (2005). The Role of Academic Technology Transfer Organizations in Improving Industry Science Links, *Research Policy*, 34(3), 321–342.
- Durst, S., & Sedenka, J. (2016). Entrepreneurial Intentions and Behaviour of Students attending Swedish Universities. Global University Entrepreneurial Spirit Students' Survey 2016. *National Report Sweden. Skövde: University of Skövde*.
- Edelman, L., Manolova, T., Shirokova, G., & Tsukanova, T. (2016). The impact of family support on young entrepreneurs' start-up activities. *Journal of Business Venturing*, 31(4), 428-448.
- Hayton, J., George, G., & Zahra, S. A. (2002). National culture and entrepreneurship: A review of behavioral research. *Entrepreneurship theory and practice*, 26(4), 33.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior. An introduction to theory and research.* New York: Addison-Wesley.
- Jones, C. & English, J. (2004). A contemporary approach to entrepreneurship education. *Education and Training*, 46(8-9), 416-423.
- Kolvereid, L. (1996). Prediction of employment status choice intentions.

  \*Entrepreneurship Theory and Practice, 21(1), 47–57.
- Kraaijenbrink, J., Groen, A., & Bos, G. (2010). What Do Students Think of the Entrepreneurial Support Given by Their Universities? *International Journal of Entrepreneurship and Small Business*, 9(1), 110–125.
- Krueger, N., Nabi, G., & Liñán, F. (2014). British and Spanish entrepreneurial intentions: a comparative study. *Revista de Economía Mundial, 33*, 73-103.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship education at university level and students' entrepreneurial intentions. *Procedia-Social and Behavioral Sciences*, 110, 658-668.
- Lerner, J. (2005). The University and the Startup: Lessons from the Past Two Decades, Journal of Technology Transfer, 30(1–2), 49–56.

- Lima, E., Lopes, R., Nassif, V., & Silva, D. (2014). Opportunities to improve entrepreneurship education: Contributions considering Brazilian challenges. *Journal of Small Business Management*, forthcoming.
- Liñán, F., & Chen, Y. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, *33*(3), 593-617.
- Liñán, F., Nabi, G., & Krueger, N. (2013). British and Spanish Entrepreneurial Intentions: A Comparative Study. *Revista de Economía Mundial*, 33.
- Luethje, C., & Franke, N. (2004). Entrepreneurial intentions of business students: A benchmarking study. *International Journal of Innovation and Technology*, *1*(3), 269-288.
- Mian, S. (1996). Assessing Value-Added Contributions of University Technology Business Incubators to Tenant Firms, *Research Policy*, 25(3), 325–335.
- Mian, S. (1997). Assessing and Managing the University Technology Business Incubator: An Integrative Framework, *Journal of Business Venturing*, 12(4), 251–285.
- Oyeku, O., Oduyoye, O., Kabouh, M., Elemo, G., Karimu, F., & Akindoju, A. (2014).

  On Entrepreneurial Self Efficacy and Entrepreneurial Success: A

  Conceptual and Theoretical Framework. *European Journal of Business*and Management, 6(26), 95-102.
- Saeed, S., Yousafzai, S., Yani-De-Soriano, M., & Muffatto, M. (2015). The role of perceived university support in the formation of students' entrepreneurial intention. *Journal of Small Business Management*, 53(4), 1127-1145.
- Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the intention—behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal*, *34*(4), 386-399.
- Sieger, P., Fueglistaller, U. & Zellweger, T. (2014). Student Entrepreneurship Across the Globe: A Look at Intentions and Activities. St. Gallen: Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG).
- Sieger, P., Fueglistaller, U., & Zellweger, T. (2016). Student Entrepreneurship 2016: Insights From 50 Countries. *St. Gallen/Bern: KMU-HSG/IMU*.

- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business venturing*, 22(4), 566-591.
- Taylor, S.E. (2011). Social Support: A Review. In: Friedman, M.S. (Ed.), *The Handbook of Health Psychology* (pp. 189-214). New York, USA: Oxford University Press.
- Wills, T.A. (1991). Social Support and Interpersonal Relationship. In: Clark, M.S. (Ed.),Review of Personality and Social Psychology (pp. 265-289). ThousandOaks, CA: Sage, Thousand Oaks, CA

# 9. Country Teams of the 2016 Edition

N	Country	University	Team Leader(s)
1	Albania / Kosovo (ALB)	AAB College	Malush Tullumi
2	Argentina (ARG)	Austral University / IAE Business School	Prof. Silvia Carbonell
3	Australia (AUS)	Curtin University of Technology	Prof. Paull Weber
4	Austria (AUT)	Johannes Kepler University Linz	Prof. Norbert Kailer
5	Belgium (BEL)	Antwerp Management School	Prof. Eddy Laveren
6	Belarus (BLR)	Belarusian State University	Dr. Radzivon Marozau
7	Brazil (BRA)	UNINOVE - Universidade Nove de Julho	Prof. Edmilson Lima
8	Canada (CAN)	Concordia University	Prof. Alexandra Dawson
9	Chile (CHI)	Universidad Catolica del Norte	Prof. Gianni Romaní
10	China (CHN)	Shanghai Finance University	Su Jing
11	Colombia (COL)	Universidad EAFIT	Prof. Claudia Alvarez
12	Croatia (CRO)	University of Zadar	Gabrijela Vidic
13	Czech Republic (CZE)	Technical University of Liberec	Prof. Klara Antlova
14	Ecuador (ECU)	Universidad Católica de Santiago de Guayaquil	Prof. Mariella Jácome Ortega
15	England (ENG)	Kingston University	Prof. Robert Blackburn
16	El Salvador	Universidad Dr. Jose Matias Delgado	Prof. Manuel Sifontes
17	Estonia (EST)	Tallinn University of Technology	Prof. Urve Venesaar
18	Finland (FIN)	Lappeenranta University of Technology	Prof. Timo Pihkala
19	France (FRA)	EM Lyon Business School	Prof. Alain Fayolle
20	Germany (GER)	University of St.Gallen (CH)	Dr. Heiko Bergmann
20	Germany (GER)	FH Fulda	Prof. Stephan Golla
21	Greece (GRE)	University of Macedonia	Prof. Katerina Sarri
22	Hungary (HUN)	University of Miskolc	Dr. Szilveszter Farkas
23	India (IND)	The Entrepreneurship School	Sanjeeva Shivesh
24	Ireland (IRL)	Dublin City University	Dr. Eric Clinton
25	Italy (ITA)	University of Bergamo	Prof. Tommaso Minola
26	Japan (JAP)	Hosei University	Prof. Noriko Taji
27	Kazakhstan (KAZ)	Turan University	Prof. Olga Sudibor
28	Korea (KOR)	Korea Entrepreneurship Foundation (KEF)	Kim Jong Sung
29	Liechtenstein (LIE)	University of Liechtenstein	Prof. Dr. Urs Baldegger
30	Lithuania (LTU)	Aleksandras Stulginskis University	Virginija Kargyte
31	Luxembourg (LUX)	Institut Universitaire International Luxembourg	Prof. Pol Wagner
32	Malaysia (MAL)	Universiti Malaysia Kelantan	Prof. Raja Suzana Kasim
33	Macedonia (MAC)	University American College Skopje	Dr. Makedonka Dimitrova
34	Mexico (MEX)	EGADE Business School	Prof. José Ernesto Amorós
35	Morocco (MAR)	Abdelmalek Essaâdi University	Prof. Hassan Ezbalehe
36	Norway (NOR)	Stord/Haugesund University College	Prof. Marina Solesvik
37	Pakistan (PAK)	Sukkur Institute of Business Administration	Dr. Altaf Hussain Samo
38	Panama (PAN)	Universidad de Panama	Omaris Vergara
			Dr. Maria Angeles Frende
39	Peru (PER)	Universidad Esan	Prof. Jaime Serida
40	Poland (POL)	Family Business Institute Poland	Prof. Adrianna Lewandowska
41	Portugal (POR)	Universidade de Lisboa	Prof. Miguel Amaral
42	Russia (RUS)	St.Petersburg University - GSOM	Prof. Galina Shirokova
43	Slovakia (SVK)	Comenius University Bratislava	Dr. Marian Holienka
44	Slovenia (SLO)	GEA College	Prof. Katja Kraskovic
45	Spain (ESP)	ESADE Business School	Dr. Joan Batista-Foguet
1.0	-	II	Dr. Maika Valencia
46	Sweden (SWE)	University of Skövde	Prof. Susanne Durst
47	Crostmand on d (CLII)	University of St College	Prof. Philipp Sieger
47	Switzerland (SUI)	University of St.Gallen HEG Fribourg	Prof. Rico Baldegger
48	Ukraine (UKR)	Stord/Haugesund University College	Prof. Marina Solesvik
49	Uruguay (URY)	Universidad Catolica del Uruguay	Prof. Catherine Krauss
77		Stetson University	Prof. Isabel Botero
50	USA	University of Vermont (UVM)	Prof. Erik Monsen
	1	omversity of vermont (U vivi)	I IOI, EHK WIOHSCH

# 10. Sponsors and Partners

Researchers thank the companies and groups that collaborated with the realization of this important Project GUESSS Ecuador 2016.

Building a better working world	Ernst & Young, EY http://www.ey.com
GUESSS  Global University Entrepreneurial Spirit Students' Survey	http://www.guesssurvey.org/
<b>EMICC</b> INVESTIGACIONES CIENTIFICAS	Research Group on entrepreneurship and family businesses in Ecuador, GEMIEC http://www.gemiec.com
UNIVERSIDAD CATÓLICA DE SANTIAGO DE GUAYAQUIL	Universidad Católica de Santiago de Guayaquil http://www2.ucsg.edu.ec/
INDUSTRIAL POWER TOOLS	MAKITA, Industrial Power Tools. http:// www.makitaservicioecuador.com
<b>Promesa</b>	Productos Metalúrgicos S.A. PROMESA.

#### 11. About the Authors

Mariella Jácome Ortega is candidate to Ph.D. in Business Administration of the Pontificia Universidad Católica del Perú (Lima, Perú). She is director and founder of GEMIEC, a group responsible to research about entrepreneurship and some topics related with business administration. She is a professor at the Economic Sciences Faculty in the Universidad Católica de Santiago de Guayaquil. Also, delivers courses on entrepreneurship and business strategic planning. Areas of her research interests are entrepreneurial intentions, academic entrepreneurship, and, innovation management.

Omar Jácome Ortega, is PhD in Business Administration of the Universidad Nebrija (Spain). He is co-founder of GEMIEC and director of the editorial committee of it. He is a professor at the Economic Sciences Faculty in the Universidad Católica de Santiago de Guayaquil. Areas of his research interests are sports management, finances, and, entrepreneurial intentions.

Both researchers were outstanding academic students in the Universidad Católica de Santiago de Guayaquil, graduated with honors for high academic performance. Now, they oversee leading the process of research about entrepreneurial intentions in Ecuador in collaboration with the international organization GUESSS of Switzerland. GUESSS is a research project directed by Professor Dr. Phillip Sieger.

For further details, please do not hesitate to contact us:

Prof. PhD (c). Mariella Jácome Ortega mariella.jacome@gemiec.com

Prof. PhD. Omar Jácome Ortega omar.jacome@gemiec.com