

# Agri-Business Curriculum: The Entrepreneurial Direction of Graduates

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## Abstract:

This study aimed to determine the entrepreneurial engagement of Agri-Business graduates from Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST), during the SY 2008-2013. The data was collected using a self-administered questionnaire, analyzed and subjected to the measures of central tendency (mean and percentage) and the Statistical Package for Social Sciences (SPSS 19.0).

Results showed that graduates were within 26 to 30 years old age, female, single, most were regular workers in a private company with 1 - 3 years working experience and were practicing entrepreneurs earning a monthly income of 10,000. High rating was extended to the level of competence on attitudinal, behavioral and educational factors. It was found out that, the respondents either felt, thought and view entrepreneurship as a thing that they had dreamed to undertake after graduation because they believed that it is only doing entrepreneurial undertakings that they can fulfill the objectives of the course and their personal beliefs that success can be attained through it.

Further, only few graduates had started their entrepreneurial engagement, while the majority, were still thinking about their entrepreneurial endeavor because of the difficulty in starting own business due to the complex administrative procedures involved. The demographic and socio-economic profile had no significant influence to the level of engagement while the level of competencies significantly influenced the level of entrepreneurial engagement.

**Keywords:** Curriculum, Agri-Business, Entrepreneurship, Education

## Introduction

Entrepreneurs are not only creating jobs for themselves, but for others as well. The positive and statistically robust link between entrepreneurship and economic growth has now been verified across a wide spectrum of units of observation, spanning the establishment, the enterprise, the industry, the region, and the country (Thurik and Wennekers, 2004).

In support, Herrington et al (2008) expounded the important role small businesses and entrepreneurship in stimulating job creation, economic growth, poverty alleviation and general uplifting of living standards has been recognized both in the local and international arena. Entrepreneurs drive innovation and speed up structural changes in the economy thereby making an indirect contribution to productivity. Entrepreneurship is one of the means through which innovation in the agricultural sector can be fostered, thereby improving the output and capabilities of small-scale farmers (Emerole, et al. 2014).

Since 20th century farming methods changed rapidly. The advent of motorized vehicles revolutionized the way farming was done (Hoaryredpoll, 2007). But in some farms were largely done by hand. Farms were typically small, but people only grew to support themselves. Any extra was sold at market to help purchase other supplies. Much of the planting, harvesting, storage etc. was done by hand, perhaps with the assistance of a carabao.

In the modernization of the agriculture sector, agribusiness is seen as a point to be greatly considered, since agriculture must now be considered as a business enterprise. To introduce the new scheme, courses in higher institutions include the offering of Agri-Business.

Agribusiness (AB) is more than agriculture. It spans the entire supply chain from seed to shelf, or from pasture to plate (Dy, 2005). To the business sector on the other hand, agribusiness means businesses related to agriculture that provides significant profits if managed well, regardless of land size.

Enrollees flock in this course, part of the curriculum is to provide student's knowledge and skills on entrepreneurship, with the aim that after they graduate they would venture on jobs related to their course such as becoming an entrepreneur and/or go back to their farm and adopt modern practices and strategies to develop the farm. However, according to Peddle, (2000) entry level agribusiness graduates have not acquired the skills necessary for the workforce and, as such, are not prepared for the demands of industry careers. That is the reason why most Agri-Business graduates became workers in malls, agriculture companies, rural banks, cooperatives, and/or work abroad as domestic helpers and factory workers.

With the transformation of agriculture from subsistence to commercial and its globalization, the challenges facing agriculture is unprecedented. As the relative proportion of graduates seeking employment in the public sector increases continually, more jobs should thereby be created in the private sector. This however, necessitates fine-tuning the entrepreneurial skills of the graduates (Word Bank, 2008).

SPAMAST with its mission to provide support in the modernization of the agriculture sector had offered agri-business course with the aim to produce not only competitive workers but committed entrepreneurs to help the agriculture

industry which is at present being monopolized by multinational companies. From the start the course was offered, there had been very few graduates who got involved in becoming an entrepreneur.

Thus, to establish a concrete data, this study was conducted to investigate the appropriateness of SPAMAST agri-business curriculum to the entrepreneurial direction of graduates and determine the factors affecting graduates' decision to venture into entrepreneurship.

## Objectives of the Study

The general objective of the study is to assess the entrepreneurial direction of Agri-Business graduates thru SPAMAST Agri-Business curriculum. Specifically, it is aimed;

- 1.To determine the demographic and socio-economic profile of the SPAMAST Agri-Business graduates.
- 2.To determine the level of agri-business/entrepreneurial competencies of the SPAMAST Agri-Business graduates in terms of:
  - 2.1.Attitudinal Factors
  - 2.2.Behavioral Factors
  - 2.3.Educational Factors
- 3.To determine the level of entrepreneurial engagement of the SPAMAST Agri-Business graduates.
- 4.To determine the practices in the offering of Agri-Business program of SPAMAST in terms of:
  - 4.1.Curriculum Content
  - 4.2.Facilities and Equipment
  - 4.3.Admission and Retention Policy
- 5.To determine the significant influence of the demographic and socio-economic profile of the SPAMAST Agri-Business graduates to the level of their entrepreneurial engagement.
- 6.To determine the significant influence between level of entrepreneurial competencies and the level of entrepreneurial engagement of the SPAMAST Agri-Business graduates in terms of:
  - 6.1. Attitudinal Factors
  - 6.2. Behavioral Factors
  - 6.3. Educational Factors

## Hypotheses

- Ho1. There is no significant influence on the demographic and socio-economic profile of the Agri-Business graduates to the level of entrepreneurial engagement.
- Ho2. There is no significant influence on the level of entrepreneurial competencies to the level of entrepreneurial engagement of Agri-Business graduates.

## Materials and Methods

### *Research Locale*

This study was conducted in the Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST), the lone state college both in Davao del Sur and Davao Occidental provinces. It is mandated to provide higher education technologies and vocational instruction and training in science, agricultural and industrial fields, as well as short term technical or vocational courses. It is also mandated to promote research, advance studies and progressive leadership in its areas of specialization. It has three campuses such as the Malita Campus and Buhangin Campus (both in Davao Occidental) and Digos Campus in Davao del Sur. One of the institutions flagship program is the Bachelor of Science in Agribusiness (BSAB) which is the focus of the study.

### *Research Design*

This study employed a descriptive research survey design. The purpose of the present study was to compliment, with an empirical investigation and theoretical discussion about entrepreneurship as a utility-maximizing response. Further, the research assessed the relationship of the entrepreneurial competencies to the entrepreneurial directions of agri-business graduates of SPAMAST.

### *Research Instruments*

The data was collected through the use of self-administered questionnaire, but in no case, survey through the use of electronic mail were also made in the study since some of the graduates are employed in other regions of the country and abroad. The questions were divided into three main groups to capture the multi-dimensional outcomes of entrepreneurship. Part I- demographic and socio-economic profile of agri-business graduates of SPAMAST from SY 2008-2013, Part II- level of entrepreneurial competencies was adapted from Lee Wei Ni, (2012) under the study "Entrepreneurial Intention: A Study among Students of Higher Learning", and finally Part III- level of entrepreneurial engagement which was adapted from the study Determinants of entrepreneurial engagement levels in Europe and the US by Isabel Grilo and Roy Thurik (2008).

Salient points however, which are important in the study and not found in the questionnaire were added by the researcher during the course of the interview.

Furthermore, the five point Likert scale was used in assessing the level of entrepreneurial engagement of Agri-Business graduates. This was done to encourage the respondents to commit to either the positive or negative side (Kerlinger, 1999).

Range	Interpretation	Quality description
5	Very high	Respondent strongly agree on the indicators of attitudinal, behavioral, educational factors and the entrepreneurial engagement of Agri-Business graduates
4	High	Respondent moderately agree on the indicators of attitudinal, behavioral, educational factors and the entrepreneurial engagement of Agri-Business graduates
3	Average	Respondent sometimes agree on the indicators of attitudinal, behavioral, educational factors and the entrepreneurial engagement of Agri-Business graduates
2	Low	Respondent rarely agree on the indicators of attitudinal, behavioral, educational factors and the entrepreneurial engagement of Agri-Business graduates
1	Very low	Respondent never agree on the indicators of attitudinal, behavioral, educational factors and the entrepreneurial engagement of Agri-Business graduates

### *The Respondents*

Both stratified and systematic sampling procedures were used in selecting the respondents in the first instance. A list comprising all the agri-business graduates from SY 2008-2013 was requested from the Office of SPAMAST Management Information System (MIS). From this, tracing the respondents were done through their official addresses as recorded in school MIS. Further, they can be located through friends, relatives and social media to get an appointment to them. Subsequently, Slovin method was used to get the grand sample size. Respondents were finally selected for this study from each year graduated, by simple random technique.

### *Data*

The data gathered in the study were demographic and socio-economic profile of agri-business graduates, the level of entrepreneurial competencies in terms of: Attitudinal, Behavioral and Educational factors, and lastly the level of entrepreneurial engagement of agri-business graduates.

### *Data Gathering Procedure*

This research study proceeded in this manner:

1. Requested permission from the respondents of the study who fulfilled all the pre-requisites to become respondents of this study;
2. Administration of the questionnaires on the respondents of the study in their respective residencies or offices as the case may be;
3. Collation of the data collected;
4. Treatment and interpretation of the data collected using the processes enumerated in the statistical treatment of data was done.

### *Statistical Tools*

The data was analyzed and subjected to several statistical tests. Frequency counts and percentages were used to tabulate the demographic, socio-economic variables. The Statistical Package for Social Sciences (SPSS 19.0) was used for data analysis. Further, Multiple regression was done to assess the relationships of entrepreneurial directions followed the latter after graduation of the SPAMAST Agri-Business graduates.

## **Results and discussions**

### *Demographic and Socio-Economic Profile*

The demographic and socio-economic profile of the SPAMAST Agri-business graduates from 2008-2013 is shown in Table 1. As disclosed in the table, in terms of age, majority of them (57%) belongs to the age bracket of 26 to 30 years old. It was followed by 20 to 25 years old (19.2%) and 31 to 35 years old (7.7%). Results implied that most of the Agri-Business graduates from 2008 – 2013 were in their past teenage years.

As to gender, majority of them were female (62.8%) and only 37.2% were male. This means that female graduates dominated the population of SPAMAST Agri-Business graduates from school years 2008 – 2013.

As to civil status, majority of the respondents were single (51.28%) and the remaining 48.72% were married.

As disclosed in the table, results revealed that 16.67% of the respondents took up another course while 83.33% did not, out of the 16.67% who had second bachelors' degree, 76.92% took BS in education while 23.08% applied and were in the Philippine National Police force. This means that even majority of the respondents did not took second degree course, there were some of them proceeded because of the fact that Agri-Business was not their first of choice.

As to the type of employment, majority of the respondents were employed in private companies (60.26%), respondents working in government were (15.38%) while a few preferred to be self-employed (24.36%). Graduates who opted to be self-employed were either into small scale livestock and poultry growing and vegetable gardening. As per interview, they firmly believe that going into and

starting a business will provide them better future and most importantly was that they can have all the time on their own without someone bossing them around. About 67.95% of them were in regular status of their employment, casual or contractual (24.35%) and 7.69% were job orders. Results implied that majority of them had a security or assurance on their job, without having the risk of becoming unemployed.

Results also disclosed that most of the respondents have 1-3 years of working experience which accounted to 62.82%, followed with 4-6 years (29.49%) and 7-9 years were (7.69%).

As to employment, 38.46% of the respondents were entrepreneurs or had engaged into agri-business, 26.92% were employed in lending institutions, 17.95% were office/ technical staff, same percentage who were employed as teachers and malls/ convenience store personnel (6.41%) and 3.85% were police officers. This means that few of Agri-Business graduates had ventures into agri-business endeavor by having a small scale business.

Moreover, as to the income of the respondents, data revealed that most of them have an income of 10,000 pesos and below (61.19%), 11,000 – 15, 000 pesos (26.87%), 16,000 – 20,000 pesos (10.45%) and 21,000 – 25,000 pesos (1.49%). This means that majority of their income were coming from employment.

In terms of the family business, it is noted that about 73% of the respondents don't have family business and 27% did. Out of the 27% who were engaged into family business, 95% were into consumer business and 5% were into enterprises. This means that few among the SPAMAST graduates had families that ventured into business.

Furthermore, for the number of years where the families of the respondents were into business, majority were engaged 11 years and above (57.14%), followed by 23.81% was in the range of 1 – 5 years and families engaged into business for 6 – 10 years were 19.04%.

**Table 1.** Demographic and Economic Profile of the SPAMAST Agri-Business graduates of School Year 2008-2013. May 2017.

Indicators	Frequency	Relative Frequency (%)
Demographic Profile		
Age		
20 to 25	15	19.2
26 to 30	57	73.1
31 to 35	6	7.7
Gender		
Male	29	37.2
Female	49	62.8
Civil status		
Single	40	51.28
Married	38	48.72

Widower	0	0
Did you enroll another course?		
Yes	13	16.67
No	65	83.33
Other course taken		
Teacher Education	10	76.92
PNPA	3	23.08
Type of Employment		
Government	12	15.38
Private	47	60.26
Self-employed	19	24.36
Employment Status		
Regular	53	67.95
Casual/Contractual	19	24.35
Job Order	6	7.69

Table 2. Continuation

Years of working experience		
1 – 3	49	62.82
4 – 6	23	29.49
7 – 9	6	7.69
Employment		
Teacher	5	6.41
PNP	3	3.85
Office/Technical staff	14	17.95
Agri-Business ventures & enterprises	30	38.46
Malls/convenience	5	6.41
Lending Institution	21	26.92
Income /Salary		
Below 10,000	52	61.19
11,000 -15,000	18	26.87
16,000 - 20,000	7	10.45
21,000 – 25,000	1	1.49
Family Business		
Yes	21	26.91



No	57	73.08
Type of Business		
Agri-Business	0	0
Consumers	20	95.24
Enterprise	1	4.76
Number of Years in the Business		
1 – 5	15	71.42
6 – 10	4	19.05
11 above	2	9.52

### *Level of Agri-Business Competencies*

#### **Attitudinal Factors Relating to Personality Traits**

The level of Agri-Business/entrepreneurial competencies of the SPAMAST Agri-Business graduates in terms of attitudinal factors is shown in Table 2. Results disclosed that all indicators under personal traits have an over-all mean of 4.01 which means that respondents had been agreeable to each of the indicators since as per interview they either felt it, thought of it and view it as a thing that they had dreamed to undertake after graduation because they believed that it is only doing entrepreneurial undertakings that they can fulfil the objectives of the course and their personal beliefs that success can be attained through it.

Numerically, the following ratings for each indicator were : that they can start their own business if there is an opportunity (4.18), they preferred to become an entrepreneur rather than an employee (4.27), and their professional goals were to become entrepreneurs (4.05). On the other hand, majority responded that they have confidence on their skills and abilities to start a business (3.91), have leadership skills that are needed to be an entrepreneur/agribusiness (3.91), have attained mental maturity to be an entrepreneur/agribusiness (3.92), to make every effort to manage their own firm (4.18), determined to create a firm in the future (3.86) and had made serious thought in starting their own firm (3.81). These high rating results can be attributed to the report of Simms (2015) that there are so many other aspects of human personalities and although some entrepreneurial traits are inborn and some people have the predisposition to become entrepreneurs, other traits can be taught and even those without the initial inclination toward business success can flourish with dedication, practice and hard work. Finally, graduates also sought independence, control and freedom from routine and that is they work for their clients, not their employers and they are their own boss - they decide when, where and how to work to get the job done (Settlement. Org, 2015).

**Table 2.** Attitudinal Factors Relating to Personality Traits of Agri-Business/Entrepreneurial Competencies of SPAMAST Agri-Business Graduates SY 2008-2013. May 2017.

Personality Traits	Mean	Description
Start their own business if they detect an opportunity.	4.18	High
Confident on their skills and abilities to start a business.	3.91	High
Have leadership skills that are needed to be an entrepreneur/agribusiness.	3.91	High
Have mental maturity to be an entrepreneur/agribusiness.	3.92	High
Prefer to be an entrepreneur rather than to be an employee in a company.	4.27	High
Professional goal is to become an entrepreneur.	4.05	High
Determined to create a firm in the future.	3.86	High
Make every effort to manage my own firm.	4.18	High
Have a very serious thought in starting my own business/firm.	3.81	High
Overall mean	4.01	High

#### Attitudinal Factors Relating to Curiosity

For the respondents, as stated in Table 3, all indicators supporting this category were rated which means that they agreed and positively accept in themselves that they prefer to be self-employed than having a secure job or employed (3.81), a career on entrepreneur was attractive to them (3.95), if given the opportunity and resources, they would start a firm (4.14), believed to being an entrepreneur would entail great satisfaction to them (3.95), and believed that if they start their business, they will certainly be successful (3.83). Curiosity would lead an entrepreneur to go forward and may pass several opened doors to new opportunities. These results are in consonance with Hunkins (2016) that the best leaders are curious and it is a must to people who would venture into business to develop curiosity. In support, curiosity is a nice trait to have according to Alonzo (2015) and it can be used in a wide variety of fields, both mentally and physically because example Kopoulos (2016) presented that intellectual curiosity is insatiable curiosity and intellectual curiosity ranks as one of the most productive and powerful qualities that any person has. Boss (2015) If one is a solopreneur there is one characteristic, one trait that separates successful entrepreneurs from all the rest. It is not resilience, it is not smarts, and it is not perseverance, it is curiosity according to Boss (2015).

**Table 3.** Attitudinal Factors Relating to the Curiosity of Agri-Business/Entrepreneurial Competencies of SPAMAST Agri-Business Graduates SY 2008-2013. May 2017.

Curiosity	Mean	Description
Rather be self-employed than have a secure job.	3.81	High
Career as entrepreneur is attractive for me.	3.95	High
Had the opportunity and resources, to start a firm.	4.14	High
Being an entrepreneur would entail great satisfactions for me.	3.95	High
Believe that if they were to start their business, they would certainly be successful.	3.83	High
Overall mean	4.0	High

#### Attitudinal Factors Relating to the Locus of Control

Two out of five presented indicators under locus of control were rated 3.00 which means that respondents were undecided if their parents had positively oriented them towards their future career as an entrepreneur (3.42) and also if their friends see entrepreneurship as a logical choice for them (3.44). However, the respondents believed that that people, who are important to them, think that they should pursue a career as an entrepreneur (3.72) since majority of the respondents during the interview disclosed that their parents have either sari-sari stores or engage into networking business and they, as children sometimes were left to tend their sari-sari store or they were allowed to accompany their parents to the market. In the school, agri-business curriculum includes subjects on entrepreneurship, product development, farm management, accounting which are leading towards entrepreneurial engagement, thus they agree that in College, students are actively encouraged to pursue their own ideas (3.82). However, respondents disagreed that there is a well-functioning support in their institution to start-up of new firms or business (2.47). These high rating posted to the two indicators can be related to that of having an internal locus of control is linked to self-efficacy, the belief that a person have about being able to do something successfully according to Nguyen (2013). This is so because individuals with an internal locus of control believe their behaviors are guided by their personal decisions and efforts and they have control over those things they can change (Donatelle, 2011).

**Table 4.** Attitudinal Factors Relating to the Locus of Control of Agri-Business/Entrepreneurial Competencies of SPAMAST Agri-Business Graduates SY 2008-2013. May 2017

Locus of Control	Mean	Description
1. Their parents are positively oriented towards their future career as an entrepreneur.	3.42	Average
2. Friends see entrepreneurship as a logical choice for their.	3.44	Average
3. Believe that people, who are important to them, think that they should pursue a career as an entrepreneur.	3.72	High
4. In College, students are actively encouraged to pursue their own ideas.	3.82	High
5. There is a well-functioning support in their institution to start-up of new firms or business.	2.47	Low
Overall mean	3.47	Average

#### Behavioral Factors Relating to Creativity

The level of agri-business/entrepreneurial competencies of the SPAMAST Agri-Business graduates in terms of behavioral factors with following indicators: creativity and risk taking is shown in Table 5 and 6. As disclosed in the table, all indicators were rated 4.00 or respondents agreed on the presented indicators.

On creativity, respondents agreed that they can adapt to change (4.05), search on how they can improve things around them (4.06), stand on their own (4.10), open-minded (4.31), creative (4.06), start a firm and keep it working well would be easy for them (3.67), and know how to develop an entrepreneurial project (3.63). In support, high creativity in undertaking a business is integral for an entrepreneur. This is strongly supported by Riyanti (2007) that an entrepreneur's creativity generally leads to creative innovations. So with that an entrepreneur's should always think and eager to find new opportunities in dealing with the ever changing conditions of an enterprise.

**Table 5.** Behavioral Factors relating to the Creativity of Agri-Business/Entrepreneurial Competencies of SPAMAST Agri-Business Graduates SY 2008-2013. May 2017.

Creativity	Mean	Description
Easily adapt to change.	4.05	High
Search on how they can improve things around them.	4.06	High
They can stand on their own.	4.10	High
Open-minded.	4.31	High
Creative.	4.06	High
To start a firm and keep it working well would be easy for them.	3.67	High
Know how to develop an entrepreneurial	3.63	High

project.		
Overall mean	3.98	High

### Behavioral Factors Relating to Risk Taking

On risk taking, respondents can go to the extent of becoming ready on taking risks (3.94), preferring more to base on their gut feeling (3.63), not to be afraid of uncertainties (3.73), to dare getting into something that others may not choose to do so (3.64) and having the notion to have high probability of succeeding if they would try to start a firm (3.69).

On the indicator, have the first instinct to engage other people to work with them, when a lot is on the line (3.45), respondents were undecided. These high rating results can be attributed to the study of Zimmerer and Scarborough (2004) that an entrepreneur who engage into new business by taking the risk in order gain profit and succeed in business by taking opportunities and combining the needed resources.

**Table 6.** Behavioral Factors Relating to Risk taking of Agri-Business/Entrepreneurial Competencies of SPAMAST Agri-Business Graduates SY 2008-2013. May 2017.

Indicators	Mean	Description
Ready to take risks.	3.94	High
Prefer more to my gut feel (intuition)	3.63	High
Not afraid of uncertainties.	3.73	High
Dare getting into something that others may not choose to do so.	3.64	High
When a lot is on the line, their first instinct is to engage other people to work with them.	3.45	Average
Tried to start a firm, would have a high probability of succeeding.	3.69	High
Overall mean	3.68	High

### Educational Factors

The level of Agri-Business/entrepreneurial competencies of the SPAMAST Agri-Business graduates is shown in Table 7. In terms of educational factors with following indicators: entrepreneurial/Agri-Business subject is very important (4.40); entrepreneurship/Agri-Business should be taught in University (4.22); Entrepreneurship/agribusiness course should be made compulsory in order to stimulate entrepreneurial spirit in campus (3.59); more entrepreneurial/Agri-Business and business educational programs on campus would help students to start businesses (4.24); my college course prepares people well for entrepreneurial careers (3.55); and to start my own firm would probably be the best way for me to take advantage of my education (4.04; and If I want, I could become self-employed after my studies (3.67). As stated in the table, all indicators were rated high. Results implied that respondents had high hopes and regard to the institution however, they believe that educational methods have not changed and

that the emphasis was still on preparing students for standard jobs, rather than making them capable enough to stand on their feet.

**Table 7.** Educational Factor of SPAMAST Agri-Business Graduates of School Year 2008 - 2013. May 2017.

Indicators	Mean	Description
Entrepreneurial/Agri-Business subject is very important.	4.40	High
Entrepreneurship/ Agri-Business should be taught in College.	4.22	High
Entrepreneurship/ Agri-Business course should be made compulsory in order to stimulate entrepreneurial spirit in campus.	3.59	High
More entrepreneurial/ Agri-Business and business educational programs on campus would help students to start businesses.	4.24	High
My College course prepares people well for entrepreneurial careers.	3.55	High
To start my own firm would probably be the best way for me to take advantage of my education.	4.04	High
If I want, I could become self-employed after my studies.	3.67	High
Overall mean	3.96	High

### *Level of Entrepreneurial Engagement of the SPAMAST*

#### **Agri-Business Graduates**

The results on the level of entrepreneurial engagement of SPAMAST agribusiness graduates are reflected in Table 8. As disclosed in the table, the following were the ratings provided: 1) thinking about it because it is difficult to start one's own business due to the complex administrative procedures (51.28%), 2) currently taking steps to start a new business & take it slowly because one should not start a business if there is a risk that it might fail (28.21%), 3) it never came to my mind because I prefer more to my gut feel (7.69%), 4) already taken steps to start a business but gave up because it is difficult to start one's own business due to lack of available financial support (6.41%); 5) taken over a business in the last 3 years and still active because I had the opportunity and resources (3.85%), and 6) took over a business more than 3 years ago and still active because in my University, students are actively encouraged to pursue their own ideas (2.57%). The main purpose of the respondents who got a degree in agribusiness was mainly to finish a four-year course thus they believed as per interview, the subjects offered in the course were enough to provide them with the knowledge and skills to become an entrepreneur. Further, they

mentioned that the product development and entrepreneurship were the subjects that encouraged them most to learn on business. What is lacking, they said, was they need fund assistance to start (for the neophyte) and to enhance the existing enterprise they were doing.

**Table 8.** Level of Entrepreneurial Engagement of SPAMAST Agri-Business Graduates of School Year 2008-2013. May 2017.

Indicators	F	Relative Frequency (%)
Never came to my mind because they prefer more to my gut feel (intuition)	6	7.69
already taken steps to start a business but gave up because It is difficult to start one's own business due to lack of available financial support	5	6.41
Thinking about it because It is difficult to start one's own business due to the complex administrative procedures	40	51.28
currently taking steps to start a new business & take it slowly because One should not start a business if there is a risk it might fail	22	28.21
Taken over a business in the last 3 years and still active because I had the opportunity and resources	3	3.85
Took over a business more than 3 years ago and still active because In my University, students are actively encouraged to pursue their own ideas.	2	2.56
Total	78	100%

### *Agri-Business Curriculum and Its Practices*

#### **Curriculum Content**

Based on the revised Agri-Business curriculum offered in SPAMAST, it has a total number of 189 units as per approved by the Board of Trustees pursuant to Resolution No. 832 dated December 10, 2014 effective SY 2015-2016. The CHED memo order no. 24 series of 2007 also known as the Policies and Guidelines for Bachelor of Science in Agri-Business (BSAB) Program has set forth a requirements of 172 units which means 17 units were added to the curriculum of SPAMAST. These excess units include the subjects like; Introduction to Humanities, Philippine Contemporary Literature, Philosophy and Ethics, Fundamentals of Information Technology 1, Fundamentals of Information Technology 2, General and Inorganic Chemistry and Mechanics and Heat. These

additional subjects were considered redundant based on analysis. Moreover, there was a major subject in the CMO, the Introduction to International Marketing that was overlooked in the preparation of the revised curriculum.

Furthermore, it was revealed that most of the researches conducted by students needs to be aligned of the thrust of the program of the institution.

### **Agribusiness Facility and Equipment**

It was noticed that classrooms of the agribusiness program were not fitted to the standard as per CHED Memo Order 24 which the ideal lecture size is 35 students, maximum is 50 per class. However, generally there are more than 50 students are allowed in one class. Classrooms not well ventilated and majority of the classes were excided the required number of students per class as set by CHED memo order. Educational Technology Center, laboratories and show rooms specific for the program was also not visible.

### **Admission and Retention Policy**

The college has not set forth specific admission policy for Agribusiness program that resulted to become the dumping ground of the BS in Agriculture, BS in Education and BS in Agriculture Engineering students.

### ***Influence of the Demographic and Socio-Economic Profile to the Entrepreneurial Engagement of Agri-Business Graduates***

The influence of demographic and socio-economic profile to the level of entrepreneurial engagement of agri-business graduates is presented in Table 9. Results revealed that the statistical results on gender age, civil status, second course taken, type of employment, employment status, years of working experience, employment, income, family business and number of years in business with P values of 0.379, 0.697, 0.193, 0.062, 0.218, 0.516, 0.870, 0.637, 0.930, 0.174 and 0.253 failed to reject the null hypotheses. Results further implied that the demographic and socio-economic profile did not have influence on the entrepreneurial engagement of the agri-business graduates.

**Table 9.** The Significant Influence of the Demographic and Socio-Economic Profile of the SPAMAST Agri-Business Graduates to the Level of their Entrepreneurial Engagement.

Indicators	Level of Entrepreneurial Engagement		
	Chi-square	P-value	Decision
Gender	1.938	0.379ns	Failed to reject Ho
Age	2.214	0.697 ns	Failed to reject Ho
Civil Status	3.285	0.193 ns	Failed to reject Ho
Second Course taken	5.560	0.062 ns	Failed to reject Ho
Type of Employment	5.758	0.218 ns	Failed to reject Ho
Employment Status	3.257	0.516 ns	Failed to reject Ho



Years of working Experience	1.247	0.870 ns	Failed to reject Ho
Employment	7.915	0.637 ns	Failed to reject Ho
Income/Salary	1.884	0.930 ns	Failed to reject Ho
Family Business	3.498	0.174 ns	Failed to reject Ho
Number of years in business	7.806	0.253 ns	Failed to reject Ho

ns- not significant

### *Influence of the Entrepreneurial Competencies to the Entrepreneurial Engagement of the SPAMAST Agri-Business Graduates*

The influence of the entrepreneurial competencies were presented in Table 10 with the following factors : attitudinal, behavioural and educational factors to the entrepreneurial engagement of agri-business graduates. Over-all results showed that the entrepreneurial competencies had significant influence to the entrepreneurial engagement of the SPAMAST Agri-Business graduates. The result is shown on the P-values of each factor, to wit: 0.000159 (attitudinal factor), 0.00000231 (Behavioral Factor and 0.000103 (education factor).

Over-all results implied that graduates whether they were doing entrepreneurial activities or not, it was obvious during the interview and basing on the ratings they posted in each presented indicators under attitudinal, behavioural and education that they possess some if not all of the desired characteristics of a successful entrepreneur (Smale, 2015) such as full of determination, not afraid of risks, passionate about her or his business and craves learning. Further, the respondents indicated that what hampers them in going into entrepreneurial activities was due to lack of capitalization.

Result is in consonance with Ten Group (2012) that it is a commonly held view that entrepreneurs are born, not made – that what leads someone to become a successful entrepreneur has more to do with their personality and innate qualities than anything learned through formal education and to stimulate entrepreneurial development and to raise entrepreneurial activity, it is first of all necessary to provide a better enabling environment for entrepreneurs, more specifically, to improve the entrepreneurial culture and climate and at the same time to improve the attitude towards entrepreneurship (Lordkipanidze et al., 2005).

Further, this result is in agreement with the study done by IBM (2010) that the effects of rising complexity will lead to bold creativity, connect with customers in imaginative ways and design operations for speed and flexibility to position organizations' success".

**Table 10.** Influence of Agri-Business Competencies to the Level of Entrepreneurial Engagement of Graduates SY 2008-2013.

Indicators	Level of Entrepreneurial Engagement	
	Chi-square	P-value
Attitudinal Factor	26.778	0.000159*
Behavioral Factor	36.392	0.0000023*
Educational Factor	27.789	0.000103*

\* -significant

Gerber (2014) in addition, indicated that although the mindset of young people is shifting toward a more entrepreneurial way of thinking, however, he reported that educational system is lagging behind. He further presented that if we don't teach young people how to freelance or start a business in college — not because they necessarily want to, but because they might *have* to — then we are not doing our job. Irregardless of the subject major, every degree program should include experiential learning so that graduates are able to apply their learning to the increasingly high-tech, fast-paced world we live in. To do so, educational leaders must start consulting with the people actually creating jobs when designing core curricula.

## Summary, conclusion and recommendations

### *Summary*

This study was conducted in the Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST), to determine the entrepreneurial engagement of Agri-Business graduates. Both stratified and systematic sampling procedures were used in selecting the respondents and the Statistical Package for Social Sciences (SPSS 19.0) was used to assess the relationships of entrepreneurial engagement of the SPAMAST Agri-Business graduates.

Results showed that majority of the respondents (57%) belongs to the age bracket of 26 to 30 years, most were female (62.8%), and 3.1% were involved in the family business and 73.1% had no work experience at all.

Over-all mean on the level of competencies is 4.01 this disclosed that respondents had been agreeable to each of the indicators, namely: that they can start their own business if there is an opportunity, they preferred to become an entrepreneur rather than an employee, and their professional goals were to become entrepreneurs.

As to the factors relating to curiosity of the respondents, all the indicators were agreed by the respondents with an overall mean of 4.0 which means they

prefer to be self-employed than having a secured job and being an entrepreneur was attractive to them, so if they are given the opportunity and resources, they would start a firm because they believed that being an entrepreneur would entail great satisfaction to them, and if they can start their own business, they will certainly be successful.

For the indicators under locus of control, an overall mean of 3.47 were rated which means that respondents had different views on the indicators presented. As to behavioral factors on creativity, respondents agreed that they can adapt to change, and also search on how they can improve things around them with an overall mean of 3.98.

Respondents can go to the extent of becoming ready on taking risks and not to be afraid of uncertainties but when a situation is ambiguous they wanted to engage with other people to work with them, with an overall mean of 3.48.

In terms of educational factors: 3.96 overall mean were rated which means entrepreneurship/Agri-Business subject is very important and should be made compulsory in order to stimulate entrepreneurial spirit in university/college campuses to prepare students well for entrepreneurial undertakings.

All indicators assessing the entrepreneurial engagement of graduates were rated 4.00 which means that all respondents agreed that they already taken steps to start a business but gave up because it is difficult to start one's own business due to lack of available financial support.

The demographic and socio-economic profile did not have influence on the entrepreneurial engagement of the agri-business graduates while the entrepreneurial competencies had significant influence to the entrepreneurial engagement of the SPAMAST Agri-Business graduates.

## *Conclusions*

Basing on the presented data, the conclusion had been drawn by the researcher:

1. SPAMAST Agri-business graduates were within age bracket of 26 to 30 years old, female, single, employed in a private company, most of them were regular and had a working experience of 1 -3 years, 38.46% were entrepreneurs with an income of 10,000 pesos and below, their families were into business for more than 11 years of its operation.
2. The level of competence of the Agri-Business graduates in terms of attitudinal, behavioral and educational factors were rated high meaning the respondents had been agreeable to each of the indicators since as per interview they either felt it, thought of it and view it as a thing that they had dreamed to undertake after graduation because they believed that it is only doing entrepreneurial undertakings that they can fulfill the objectives of the course and their personal beliefs that success can be attained through it.
3. On the level of entrepreneurial engagement, majority of the respondents were thinking about their entrepreneurial endeavor because according to them, it is difficult to start one's own business due to the complex administrative procedures (51.28%).

4. The demographic and socio-economic profile did not significantly influence the level of engagement of agri-business graduates.
5. The level of competencies significantly influenced the level of entrepreneurial engagement of agri-business students.

### *Recommendations*

The following recommendations are suggested by the researcher:

1. The course content of the curriculum for agri-business is enough for the graduates to get substantial knowledge and skills to entrepreneurial endeavors, graduates need to avail a start-up capital for the business venture.
2. The subjects regarding product development, entrepreneurship, farm management, and feasibility studies must be offered in the second year level so that students can prepare for a business proposal for funding by SPAMAST or by CHED.
3. Syllabus enhancement focusing more on practical application of business practice.
4. Practicum courses or on-the job training shall be utilized for the business practice of students to hone the entrepreneurial skills among students .
5. Assist students to avail the student loan program of CHED the STUDENT AGRIBUSINESS ENTERPRISE LOAN FUND (SALF) as per CHED-CMO No. 16 series of 2013 to allow student to go into business enterprise and become successful agri-entrepreneurs.
6. SPAMAST shall provide commercial space for business so that products developed out of their subjects shall be displayed and sold.
7. Hire Faculty who are business practitioners so that practical and theoretical knowledge shall be integrated well in the subjects.
8. Strengthen the research and extension services to include provision of technical assistance to agri-business graduates who would pursue entrepreneurial activities after graduation.
9. Research proposals of the students should be pass through a technical committee for review and assurance to be aligned on strategic plan of the institution.

### **References:**

- ADESOPE, O. M., E.C. MATTHEWS-NJOKU, N.S. OGUZOR and V.C. UGWUJA. 2012. Effect of Socio-Economic Characteristics of Farmers on Their Adoption of Organic Farming Practices, Crop Production Technologies, Dr. Peeyush Sharma (Ed.), ISBN: 978-953-307-787-1, InTech, Available from: <http://www.intechopen.com/books/crop-production-technologies/effect-of-socio-economic-characteristics-offarmers-on-their-adoption-of-organic-farming-practices>
- ARROW, K. J. 1997. "Invaluable goods." *Journal of Economic Literature* 35:2: 757-765.
- ALCHIAN, A. A. and H. DEMSETZ. 1972. Production, information cause, and economic organization. *American Economic Review* 62:777-795.
- ABDULLAH, F., J. HAMALI, A. R. DEEN, G. SABAN, A., ABDURAHMAN. 2009. "Developing a framework of success of Bumiputera entrepreneurs", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 3 Iss: 1, pp.8 – 24

- AHMAD, Z. S. and S.R. XAVIER. 2012. "Entrepreneurial environments and growth: evidence from Malaysia GEM data", *Journal of Chinese Entrepreneurship*, Vol. 4 Iss: 1, pp.50 - 69
- ALDRICH, H. 1990. "Using an Ecological Perspective to Study Organizational Founding Rates", *Entrepreneurship: Theory and Practice*, Vol. 14, No. 3, pp. 7-24.
- ALDRICH, H.E. 2000. *Organizations Evolving*, Sage, Newbury Park, CA.
- ALONZO, M. 2015. *The Benefits of Being Curious*. <http://www.dailyinfographic.com>.
- BLACKIE, M., R. BLACKIE, U. LELE and N. BEINTEMA. 2010. Capacity development and investment in agricultural R&D in Africa. Lead background paper ministerial conference on higher education in agriculture in Africa. Speke Resort Hotel, Munyonyo, Kampala, Uganda, 15–19 November 2010. As cited by Goemans (2014). *Youth and Agriculture : Key Challenges and Concrete Solutions*. Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD).
- BANK, WORD. 2008. "Global monitoring report." Washington DC: World Bank.
- BADER 2012. [www.baderlebanon.com](http://www.baderlebanon.com)
- BAENA, V. 2012. "Market conditions driving international franchising in emerging markets", *International Journal of Emerging Markets*, Vol. 7 ISS: 1, pp.49 - 71 Brennan, M.C., Wall, A.P. and McGowan, P. (2005). "Academic entrepreneurship: Assessing preferences in nascent entrepreneurs". *Journal of Small Business and Enterprise*.
- BOSMA, NIELS S., and J. LEVIE. 2010. "Global Entrepreneurship Monitor 2009 Executive Report."
- BOSS, J. 2015. *Curiosity Is the Key to Discovering Your Next Breakthrough Idea*.
- BIRD, BARBARA. "Implementing entrepreneurial ideas: The case for intention. 1988." *Academy of management Review* 13.3: 442-453.
- CABARDO, JEWEL JOANNA S., and B. JEANETTE ANGELINE 2014. Madamba. "Perceptions of UP Los Baños Agribusiness Management Graduates on Their Job Preparedness." *Journal of Global Business and Trade*: 1-16.
- CANTILLON, BEA. 2011. "The paradox of the social investment state: growth, employment and poverty in the Lisbon era." *Journal of European Social Policy* 21.5: 432-449.
- CHRISMAN, JAMES J., J. H. CHUA, AND P. SHARMA. 2005. "Trends and directions in the development of a strategic management theory of the family firm." *Entrepreneurship theory and practice* 29.5: 555-576.
- CHOWDHURY, M. S 2007. "Overcoming entrepreneurship development constraints: the case of Bangladesh", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 1 ISS: 3, pp.240 - 251
- COLLINS, C.J., P.J., HANGES, E.A. LOCKE, 2004. "The Relationship of Achievement Motivation to Entrepreneurial Behavior: A Meta-Analysis", *Human Performance*, Vol. 17 No. 1, pp. 95-117. Collins, L., Hannon, P., Smith, A. (2004) "Enacting entrepreneurial intent: the gaps between student needs and higher education capability", *Education + Training*, Vol. 46 ISS: 8/9, pp.454 – 463 Chowdhury, M. (2007) "Overcoming entrepreneurship development constraints: the case of Bangladesh", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 1 ISS: 3, pp.240 – 251.
- CHARNEY, ALBERTA, and G. D. LIBECAP. 2000. *Impact of entrepreneurship education*. Kansas City, MO: Kauffman Center for Entrepreneurial Leadership
- DAVIS, JOHN H., and R. A. GOLDBERG. 1957. "Concept of agribusiness."
- DOLE, 2012. *Industry Career Guide : Agri-Business*.
- DY, ROLANDO. T. 2002. Closing the Productivity Gap in Agribusiness, Paper presented during the conference entitled "Policies to Strengthen Productivity in the Philippines," sponsored by the Asia-Europe Meeting (ASEM) Trust Fund, Asian Institute of Management Policy Center, Foreign Investment Advisory Service, Philippines Institute of Development Studies and the World Bank, June 27-28, 2005.
- DY, ROLANDO T. "Closing the productivity gap in agribusiness." *Philippines: Asia-Europe Meeting (ASEM)–World Bank*. 2005.
- EMEROLE, C. O., U. DORCAS, and C. KELECHI. 2014. Determinants of Entrepreneurship Decision for Agricultural Business among Graduates in Abia State, Nigeria. *International Conference on Agricultural, Environmental and Biological Sciences (AEBS-2014)* April 24-25, 2014 Phuket (Thailand).
- EDWARD, R.C., CHOOI, L.W. 2007, "Malaysia vs. Singapore; e-commerce supremacy in Asia", Part 2, available at: [www.echenard.com/business/eaprt2.htm](http://www.echenard.com/business/eaprt2.htm) (accessed December 6, 2007) Frank, H., Korunka, C., Lueger, M., Mugler, J. (2005), "Entrepreneurial orientation and education in Austrian secondary schools", *Journal of Small Business and Enterprise Development*, Vol. 12 No.2, pp.259-73.

- FAO (FOOD and AGRICULTURE ORGANIZATION OF THE UNITED NATIONS). 1997. Higher agricultural education and opportunities in rural development for women – An overview and summary of five case studies. M.Karl. Rome. As cited by Goemans (2014). Youth and Agriculture : Key Challenges and Concrete Solutions. Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD).
- FATOKI, OLAWALE, and O. ONI. 2014."Students' Perception of the effectiveness of Entrepreneurship education at a South African University." *Mediterranean Journal of Social Sciences* 5.20: 585.
- FAIRLIE, ROBERT W., and A. M. RESCH. 2002. "Is there "white flight" into private schools? Evidence from the National Educational Longitudinal Survey." *Review of Economics and Statistics* 84.1: 21-33.
- FAO. 2012. Small Holders and Family Farmers. Factsheet SMALLHOLDERS. Sustainability Pathways. <http://www.fao.org>
- GARAVAN, THOMAS N., and B. O'CINNEIDE. 1994. "Entrepreneurship education and training programs: A review and evaluation-Part 1." *Journal of European industrial training* 18.8: 3-12.
- GEDEON, STEVE. 2010. "What is entrepreneurship?." *Entrepreneurial practice review* 1.3.
- GEM GLOBAL REPORT, 2011. Global Entrepreneurship Monitor, [www.gemconsortium.org](http://www.gemconsortium.org)
- GÜROL, Y. and N. ATSAN, 2006. "Entrepreneurial characteristics amongst university students: Some insights for entrepreneurship education and training in Turkey", *Education and Training*, Vol. 48 No. 1, pp. 25-38.
- HERRINGTON, M. J. KEW, and .P. KEW, 2008. Global Entrepreneurship monitor. South Africa Report Cape town: Graduate School of Business University of Cape Town. As cited by Emerole, C.O., U. Dorcas, and C. Kelechi. 2014. Determinants of Entrepreneurship Decision for Agricultural Business among Graduates in Abia State, Nigeria. International Conference on Agricultural, Environmental and Biological Sciences (AEBS-2014) April 24-25, 2014 Phuket (Thailand).
- HSIEH, C., PARKER, C. SIMON, M. VAN PRAAG, 2011. "Risk, Balanced Skills and Entrepreneurship," IZA Discussion Papers 6200, Institute for the Study of Labor (IZA).
- HARIAN, BERITA. 2006. "9.8% keseloperasiterbiartidakserius." 23rd July.
- JAAFAR, M., and M. ABDUL AZIZ, 2008. "Entrepreneurship education in developing country: Exploration on its necessity in the construction program", *Journal of Engineering, Design and Technology*, Vol. 6 ISS: 2, pp.178 – 189.
- KRISTIANSEN, STEIN, and N. INDARTI. 2004. "Entrepreneurial intention among Indonesian and Norwegian students." *Journal of Enterprising Culture* 12.01: 55-78.
- KATZ, J.A. 2003. Modeling entrepreneurial career progressions: Concepts and considerations. *Entrepreneurship Theory and Practice* 19(2):23-40.
- KOPOULOS, A. 2000. The Curious Thing About Intellectual Curiosity
- KRISTIANSEN, S., and N. INDARTI, 2004. "Entrepreneurial Intentions among Indonesian and Norwegian Students", *Journal of Enterprising Culture*, Vol. 12, No. 1. 22
- KOLVEREID, LARS, and ØYSTEIN MOEN. 1997. Entrepreneurship among business graduates: does a major in entrepreneurship make a difference?." *Journal of European industrial training* 21.4 (): 154-160.
- KRUEGER, NORRIS F., and A. L. CARSRUD. 1993. "Entrepreneurial intentions: applying the theory of planned behaviour." *Entrepreneurship & Regional Development* 5.4 (): 315-330.
- KADIR, MUMTAZ BEGAM ABDUL, M. SALIM, and H. KAMARUDIN. 2010. "Factors affecting entrepreneurial intentions among Mara professional college students." *Proceeding International Conference on Learner Diversity*.
- LINGELBACH, D., L. DE LA VINA, P. ASEL, 2005. "What's distinctive about growth-oriented entrepreneurship in developing countries?," working paper No. 1, Center for Global Entrepreneurship, UTSA College of Business, San Antonio, TX.
- LINAN, FRANCISCO. 2008. "Skill and value perceptions: how do they affect entrepreneurial intentions?." *International Entrepreneurship and Management Journal* 4.3 (): 257-272.
- LORDKIPANIDZE, M., H. BREZET and M. BACKMAN. 2005. The entrepreneurship factor in sustainable tourism development. *Journal of Cleaner Production* 13 (2005) 787e-98. <http://www.sciencedirect.com>.
- MOKAYA, SAMUEL OBINO. 2012. "Corporate Entrepreneurship and Organizational Performance Theoretical Perspectives, Approaches and Outcomes." *International Journal of Arts and Commerce* 1.4: 133-143.
- MACDONALD, G. 1984. New directions in the economic theory of agency. *Canadian Journal of Economics* 17:415-440.

- MARIOTTI, GLACKIN 2012, "Entrepreneurship and Small Business Management", Prentice Hall.
- NABI, G., and F. LIÑÁN, 2011. "Graduate entrepreneurship in the developing world: intentions, education and development", *Education + Training*, Vol. 53 Iss: 5, pp.325 – 334
- NI, LEE WEI. 2012. *Entrepreneurial Intention: A Study among Students of Higher Learning*. Diss. UNIVERSITI TUNKU ABDUL RAHMAN,.
- NGUYEN, S. 2013. *Locus Of Control: Stop Making Excuses and Start Taking Responsibility*. <https://workplacepsychology.net>
- OOSTERBEEK, HESSEL, M. V. PRAAG, and A. IJSSELSTEIN. 2010."The impact of entrepreneurship education on entrepreneurship skills and motivation." *European economic review* 54.3: 442-454.
- PAISLEY, C. 2012. Skill gaps in formal higher agricultural education: a youth perspective. Background paper for the Future Agricultures Conference on Young People, Farming and Food: The Future of the Agri food Sector in Africa. As cited by Goemans (2014). *Youth and Agriculture : Key Challenges and Concrete Solutions*. Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD).
- PENG, MIKE W., AND YADONG LUO. 2000. "Managerial ties and firm performance in a transition economy: The nature of a micro-macro link." *Academy of management journal* 43.3: 486-501.
- PEDDLE, MICHAEL T. 2000. "Frustration at the factory: Employer perceptions of workforce deficiencies and training needs." *Journal of Regional Analysis and Policy* 30.1: 23-42.
- ROFFE, I. 2010. "Sustainability of curriculum development for enterprise education: Observations on cases from Wales", *Education + Training*, Vol. 52 ISS: 2, pp.140 – 164.
- RIYANTI, B.P.D. 2007. *Proceeding Congress APIO III. 2007. Psychometric Analysis Kirton Adoption Innovation Inventory*.
- SANDHU, M.S., SIDIQUE, S.F., RIAZ, S. 2011. "Entrepreneurship barriers and entrepreneurial inclination among Malaysian postgraduate students", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 17 ISS: 4, pp.428 – 449.
- SHAY, J., &TERJENSEN, S. 2005. *Entrepreneurial aspirations and intentions of business students: A gendered perspective*. [Online] Available:[http://www.babson.edu/entrep/fer/2005FER/chapter\\_ii/summary\\_ii7.html](http://www.babson.edu/entrep/fer/2005FER/chapter_ii/summary_ii7.html)(June 20, 2010)
- SHAPERO, ALBERT, and L. SOKOL. 1982. "The social dimensions of entrepreneurship."
- SCHULLER, TOM, ET AL. 2004. *The benefits of learning: The impact of education on health, family life and social capital*. Routledge.
- SLAVTICHEV, VIKTOR, STAVROULA LASPITA, and HOLGER PATZELT. 2012. *Effects of entrepreneurship education at universities*. No. 2012, 025.Jena Economic Research Papers.
- Settlement.org. 2015. *What are the advantages of self-employment? What are the disadvantages*.
- SIMMS, M. 2008. *Are Entrepreneurial Characteristics Inherited or Learned? The Bellingham Business Journal*. 31 May 2008.
- THURIK, A.R., WENNEKERS, A.P.M. 2004. "Entrepreneurship, small Business and Economic Growth", *Journal of Small Business and Enterprise Development*, Vol. 11 No. 1, pp. 140-149.
- TAORMINA, R.J., and S. K. M. LAO, 2007. "Measuring Chinese entrepreneurial motivation, personality and environmental influences", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 13 No.4, pp.200-21.
- Thurik, A.R., and A.P.M. Wennekers, 2004. "Entrepreneurship, small Business and Economic Growth", *Journal of Small Business and Enterprise Development*, Vol. 11 No. 1, pp. 140-149.
- TURNBULL, A., S. WILLIAMS, A. PADDISON, and G. FAHAD, 2001. "Entrepreneurship Education: Does it Work?", *Enterprise and Learning*, University of Aberdeen, Aberdeen.
- TUSIAD REPORT 2002. "Entrepreneurship in Turkey" available at: [www.tusiad.org/turkish/rapor/girisimcilik/girisimcilik.pdf](http://www.tusiad.org/turkish/rapor/girisimcilik/girisimcilik.pdf). Wang, C.K., Wong, P.K. (2004), "Entrepreneurial interest of university students in Singapore", *Technovation*, Vol. 24 pp.161-72.
- Ten Group. 2012. *Are Entrepreneurs Born or Made?* <https://tengroup.org.uk>
- VAN DER SLUIS, JUSTIN, MIRJAM VAN PRAAG, and WIM VIJVERBERG. 2008. "Education and entrepreneurship selection and performance: A review of the empirical literature." *Journal of economic surveys* 22.5: 795-841.
- WORLD BANK. 2011. *AWorld development report 2012: gender equality and development*. Washington, DC, International Bank for Reconstruction and Development/World Bank. As cited by Goemans (2014). *Youth and Agriculture : Key Challenges and Concrete Solutions*. Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD).

- WORLD BANK, 2008. World Bank development report. As cited by Emerole, C.O., U. Dorcas, and C. Kelechi. 2014. Determinants of Entrepreneurship Decision for Agricultural Business among Graduates in Abia State, Nigeria. International Conference on Agricultural, Environmental and Biological Sciences (AEBS-2014) April 24-25, 2014 Phuket (Thailand).
- WEBER, CHRISTIAN F., ET AL. 2011. "Tranexamic acid partially improves platelet function in patients treated with dual antiplatelet therapy." *European Journal of Anaesthesiology (EJA)* 28.1 : 57-62.
- WILSON, BRADLEY, and JÖRG HENSELER. "Modeling reflective higher-order constructs using three approaches with PLS path modeling: a Monte Carlo comparison." ANZMAC, 2007.
- ZELEALEM, T., S.V. TEMTIME, J.P.W. CHINYOKA, and J.P.W. SHUNDA, 2004. "A Decision Tree Approach for Integrating Small Business Assistance Schemes", *Journal of Management Development*, Vol. 23 No. 6, pp.563-578.
- ZHAO, HAO, S.E. SEIBERT, and G. E. HILLS. 2005. "The mediating role of self-efficacy in the development of entrepreneurial intentions." *Journal of applied psychology* 90.6 : 1265.
- ZELLWEGER, THOMAS, P. SIEGER, and F. HALTER. 2011. "Should I stay or should I go? Career choice intentions of students with family business background." *Journal of Business Venturing* 26.5: 521-536.
- HUNKINS, A. 2016. Three Big Business Benefits to Being Curious. <http://www.pioneerleadership.com>
- ZIMMERER, T.W. & SCCARBOROUGH, N.M. 2001. *Essentials of Entrepreneurship and Small Business Management*. Prentice-Hill: Upper Saddle River, NJ.