

# **ENTREPRENEURSHIP: INTENTIONS, INSTITUTIONAL AND PROCESS**

**Edited by**

**Anna Ujwary-Gil  
Krzysztof Klincewicz**

**Volume 11 Issue 2  
2015**

# Contents

<b>From the Editors</b>	<b>3</b>
<b>Chao-Tung Liang, Chaoyun Liang</b> Interaction of Psychological Factors in Shaping Entrepreneurial Intention Among Computer and Electrical Engineering Students	<b>5</b>
<b>Jacob L. Oyugi</b> The Mediating Effect Of Self-Efficacy on the Relationship Between Entrepreneurship Education and Entrepreneurial Intentions of University Students	<b>31</b>
<b>Neema Mori</b> Access to Business Development Support Services and Performance of Youth-Owned Enterprises in Tanzania	<b>57</b>
<b>Petra Merenheimo</b> Money cares. Institutional Entrepreneurship in the Finnish Social Services Sector	<b>83</b>
<b>Temidayo Gabriel Apata</b> Entrepreneurship Processes and Small Farms Achievements: Empirical Analysis of Linkage	<b>105</b>

## From the Editors

This issue contains, among others, articles referring to the theories associated with entrepreneurial intentions which assume that entrepreneurship is a process affected by a number of factors such as needs, wants, values, and habits that shape, firstly, the intentions and then entrepreneurial behavior. In the literature, research on man and his individualism as subject and central in the entrepreneurial process has become very common. At the same time, it is assumed that entrepreneurial activity which results in starting a business, is consequential to deliberate and planned behavior. At the stage of establishing companies, special attention would therefore be paid to entrepreneurial intentions. Their development is affected by entrepreneurial education, as well as entrepreneurial knowledge acquired in the process of education.

Noteworthy, therefore, is the first article by Chao-Tung and Chaoyun Liang Liang, who studied the impact of selected psychological factors on entrepreneurial intentions of computer and electrical engineering students in Taiwan, further testing the interactive effects, between psychological factors, on entrepreneurial intentions. A new class appears here – the technopreneurs – which in this article was carefully examined from the point of view of entrepreneurial intentions. Another article by Jacob L. Oyugi also raises the same issue from the perspective of entrepreneurship education and self-efficacy in increasing the said intention of entrepreneurship students, this time in Uganda. The authors of the two articles seem to confirm that to be motivated to act, potential entrepreneurs need to feel convinced about the self-agency of their actions.

In the third article, the author Neema Mori also deals with the problem of entrepreneurship of young people, but from a different perspective, namely, their access to services supporting business development, verifying the impact of access to experts and training on the operation of their businesses in Tanzania. A slightly different issue related to entrepreneurship, this time institutional, was addressed by Petra Merenheimo. In her article, the author discusses solutions for the sale and purchase of care in the model of consumer choice applicable in Finland, paying particular attention to the conversion of capital in institutional entrepreneurship. Finally, there is the article by Temidayo Gabriel Apata, who raises the issues of the efficiency of

---

management in small farms and entrepreneurship process strategy, pointing to the need to identify training needs in agricultural entrepreneurship.

We present our readers with an international issue of the Journal addressing problems associated with entrepreneurship as seen in Taiwan, Uganda, Tanzania, Finland, and Nigeria, which offers diverse research approaches and methods. We wish to express gratitude to the authors of these articles, whose contributions shaped this issue. We also thank all the reviewers for their willingness to share their expert knowledge and experience with the authors, along with substantive support. We believe, this commendable effort and cooperation results in attention to high quality of the publication.

**Dr Anna Ujwary-Gil**

Editor-in-Chief, JEMI

**Dr hab. Krzysztof Klincewicz, prof. UW**

University of Warsaw, Poland and Associate Editor, JEMI

---

---

# Interaction of Psychological Factors in Shaping Entrepreneurial Intention Among Computer and Electrical Engineering Students

*Chao-Tung Liang<sup>1</sup>, Chaoyun Liang<sup>2</sup>*

---

## Abstract

*Numerous technopreneurs start their ventures at college age, but the entrepreneurship of computer and electrical engineering (CEE) students remains under-studied. This study analysed both the combined and interactive effects of psychological factors on the entrepreneurial intentions of CEE students. In this study, entrepreneurial intention comprised two dimensions, conviction and preparation. Regarding the direct effects, the results indicated that self-efficacy affected entrepreneurial conviction the most, followed by negative emotion, intrinsic motivation, and metacognition. Negative emotion affected entrepreneurial preparation the most, followed by self-efficacy and positive emotion. The results also revealed several crucial interactive effects resulting from psychological factors. An increase in cognitive load increased the entrepreneurial intention of students exhibiting high intrinsic motivation and reduced the intention of students exhibiting low intrinsic motivation. An increase in metacognition increased the entrepreneurial conviction of students exhibiting either high or low intrinsic motivation. An increase in positive emotion reduced the entrepreneurial intention of students exhibiting high negative emotion and increased the intention of students exhibiting low negative emotion. An increase in self-efficacy increased the entrepreneurial intention of students exhibiting either high or low negative emotion.*

**Keywords:** *computer and electrical engineering (CEE), entrepreneurial intention, interactive effects, psychological factors, university students.*

---

## INTRODUCTION

Entrepreneurship is a primary source of economic growth that creates business opportunities and reduces unemployment (Szirmai, Naude, & Goedhuys,

---

1. *Chao-Tung Liang*, Assistant Professor, Department of Cultural Creativity and Digital Media Design, Lunghwa University of Science and Technology, New Taipei, Taiwan. E-mail: liangdondon@gmail.com.

2. *Chaoyun Liang*, Professor, Department of Bio-Industry Communication and Development, National Taiwan University, Taipei, Taiwan. Correspondence concerning this article should be addressed to Chaoyun Liang, Department of Bio-Industry Communication and Development, National Taiwan University, No. 1, Sec. 4, Roosevelt Road, Taipei, 10617, Taiwan. E-mail: cliang@ntu.edu.tw.

---

2011). Specifically, information technology sectors have been amongst the major drivers of economic growth in numerous countries over the past decades. Among the emerging concerns of technology sector management, technopreneurship has become a central one (Klincewicz, 2012), particularly in developing countries (Szirmai et al., 2011).

Taiwan's computer and electrical engineering (CEE) industry has been ranked high worldwide. A high percentage of worldwide CEE products are manufactured by Taiwanese original equipment manufacturers, thus influencing the choice of programmes of university students in Taiwan. In the past 10 years, CEE related programmes (i.e., electrical engineering, electronic engineering, computer technology, and information management) in universities have been listed amongst the top 10 choices of high school students (Ministry of Education, 2015). Most students graduating from CEE programmes choose large CEE firms in science parks to work, but increasing numbers of them have undertaken ventures on the basis of their innovative ideas and techniques in CEE. Entrepreneurship has become a widely discussed concept and an action of choice for numerous CEE graduates.

Although numerous CEE entrepreneurs start their ventures at college age, student entrepreneurship remains under-studied in business research (Liang, Chia, & Liang, 2015). Particularly, research on CEE entrepreneurial intention and behaviour has been ignored in technology education disciplines (Chen, 2013). Scholars indicated that entrepreneurial intention and behaviour involves numerous psychological factors that should be intensively studied (Leon, Gorgievski, & Lukes, 2008; Obschonka, Schmitt-Rodermund, Silbereisen, Gosling, & Potter, 2013). These psychological factors include cognition, motivation, emotion, and self-efficacy (Carsrud & Brännback, 2012; Markman, Balkin, & Baron, 2002; Ooi & Ahmad, 2012; Welpel, Spörrle, Grichnik, Michl, & Audretsch, 2012). However, few studies have empirically examined how these psychological factors interactively influence the entrepreneurial intention amongst CEE students.

In keeping with these findings and to fill the research gap, the present study used college students with CEE majors to analyse the integrated effects of psychological factors on entrepreneurial intention and test the interactive effects resulting from these psychological factors. We focused on the psychological factors intrinsic motivation, extrinsic motivation, positive emotion, negative emotion, cognitive load, metacognition, and self-efficacy. The assessment of entrepreneurial intention was based on Liñán and Chen (2009) and Lans, Gulikers, and Batterink (2010). The measurements of psychological factors were adopted from several international scales (Chen, Gully, & Eden, 2001; Harter, 1981; Hsu, Liang, & Chang, 2013; Paas, & van

---

Merriënboer, 1994; Schraw & Dennison, 1994; Tuccitto, Giacobbi, & Leite, 2010).

### **Entrepreneurial intention**

Thompson (2009) defined entrepreneurial intention as “a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future” (p. 676). Previous studies have indicated that entrepreneurial intention is a strong predictor of planned behaviour (Ajzen, 1991; Bird, 1988; Covin & Slevin, 1989). Pittaway and Cope (2007) suggested that more studies on entrepreneurial intention should be linked to employability in small and medium enterprises to provide a justification that is more than merely economical. Universities have been regarded as a source of technological development that is useful to entrepreneurial activity (Shane, 2004). The present study focused on entrepreneurial intention, because intention towards purposive behaviour can be a crucial antecedent to entrepreneurial behaviour.

Cooper and Dunkelberg (1986) indicated that various paths to achieving business ownership are related to the background characteristics, motivations, attitudes, and employment history of owner-managers, as well as the support they receive and the processes they employ to start a new business. Cooper and Dunkelberg reported that entrepreneurs who establish firms differ considerably from those who are promoted or hired. Moreover, those who inherit or purchase a firm fall between these two extremes. On the basis of this observation, Lans et al. (2010) defined three types of intention to create a business; classical entrepreneurial intention (i.e., the intention to establish a business), alternative entrepreneurial intention (i.e., the intention to continue operating an inherited or acquired firm), and intrapreneurial intention (i.e., the intention to be an intrapreneur or corporate entrepreneur). These three types of intention suggest that learning goals and professional needs differ amongst entrepreneurs. In the current study, entrepreneurial intention was measured according to Liñán and Chen (2009) and Lans et al. (2010).

Prodan and Drnovsek (2010) claimed that there are knowledge gaps regarding the specific determinants and processes that characterise the emergence of academics' entrepreneurial intentions that lead them to establish spin-off companies. Prodan and Drnovsek proposed that psychological and entrepreneurial research on intentionality should be devoted to this topic. Previous studies have indicated that the entrepreneurial intentions of undergraduate students in business and engineering majors are influenced by their family members, academics, attending courses on

entrepreneurship, gender differences, and personality traits (Chen & Chen, 2015; Gerba, 2012; Zain, Akram, & Ghani, 2010). Murah and Abdullah (2012) studied computer science students and found that their entrepreneurial intentions were influenced by entrepreneurial experience in childhood, family background, personality type, and future plans. Kaltenecker and Hörndlein (2013) identified attitude as the main driver for information systems students, and discovering business ideas was the most influential factor for computer science students. The opportunity for self-fulfilment and the prospect of a high monetary reward were identified as the crucial drivers for these students. The results of aforementioned studies indicate that various psychological factors have a profound impact on student intention of entrepreneurship.

### **Psychological factors**

Leon et al. (2008) indicated that prior research on entrepreneurial intentions has long been associated with the field of psychology. The critical psychological factors may include motivation, cognition, emotion, and self-efficacy. Both extrinsic and intrinsic motivation affect a person's future actions and provide energy, direction, and persistence for entrepreneurial intention (Dej, 2008; Ryan & Deci, 2000). Extrinsic motivation refers to a person's internal desire, which is driven by their interest or enjoyment in performing a task, and includes security, wealth, status, power (Vesalainen & Pihkala, 1999), group setting, organisational characteristics (Choi, Price, & Vinokur, 2003), social norms (Ajzen, 1991), and cultural context (Liñán & Chen, 2009). Extrinsic motivation can transform into intrinsic motivation in supportive environments (Ryan & Deci, 2000). Intrinsic motivation refers to that from external pressures or rewards, and includes attitude, behavioural control (Ajzen, 1991), personal attractiveness, experience, involvement, and engagement (Kamau-Maina, 2008). Previous research has particularly suggested that the closer to an entrepreneurial career the decision making occurs, the more personal intrinsic motivation is involved (Carsrud & Brännback, 2012; Vesalainen & Pihkala, 1999). Therefore, we proposed the first following hypothesis:

**Hypothesis 1:** Both intrinsic and extrinsic motivation predict entrepreneurial intention.

Previous studies have determined that positive emotions (emotional responses that are modelled to dictate positive affection, including excitement, happiness, joy, and satisfaction) and negative emotions (unpleasant or unhappy

emotions that express a negative affection towards an event or person, including fear of failure, anger, loneliness, mental strain, and grief) influence people's judgment, memory recall, and deductive and inductive reasoning (George, 2000), as well as the decision to engage in self-employment (Patzelt & Shepherd, 2011; Welppe et al., 2012). Numerous scholars have confirmed that entrepreneurs' emotions, which are antecedent to, concurrent with, and a consequence of the entrepreneurial process, are likely to affect the recognition, creation, evaluation, reformulation, and exploitation of business opportunities (Cardon, Foo, Shepherd, & Wiklund, 2012; Podoyntsyna, Van der Bij, & Song, 2012); hence, emotional intelligence has become a crucial factor in cultivating entrepreneurial students (Zakarevičius & Župerka, 2010). We thus proposed the second hypothesis:

**Hypothesis 2:** Both positive and negative emotions predict entrepreneurial intention.

Furthermore, previous studies have emphasised the effects of cognitive resources on business start-ups (Haynie, Shepherd, & Patzelt, 2012; Van Gelderen, 2009). Successful entrepreneurs must be capable of making appropriate choices to avoid cognitive overload resulting from novelty, change, uncertainty, and complexity (Van Gelderen, 2009). Cognitive load here refers to the overall mental activity imposed on a person's working memory at a particular time. Sánchez (2012) concluded that people intending to establish a business apply cognitive scripts that allow them to process information and perceive the advantages of starting a business despite adverse market conditions. In addition, Haynie, Shepherd, Mosakowski, and Eagly (2010) suggested that metacognitive abilities are core characteristics of entrepreneurial cognition because they enable entrepreneurs to think beyond existing knowledge and promote adaptable cognition in novel decision contexts. Metacognition here refers to the processes that allow people to consider their cognitive abilities. Urban (2012) concluded that potential entrepreneurs consciously consider the possibility of starting a new business, and that their entrepreneurial intentions are the result of metacognitive processes. Therefore, we proposed the third hypothesis:

**Hypothesis 3:** Both the cognitive load and metacognition predict entrepreneurial intention.

In addition to expected outcomes and social influences, self-efficacy has been proven to be the most crucial psychological factor affecting the entrepreneurial intentions of students (Chen, 2013). Self-efficacy refers

to a person's belief regarding their ability to succeed in specific situations. People with high self-efficacy typically perceive themselves as capable of affecting change and performing actions that are necessary to resolve problems (Bandura, 2000). Self-efficacy has frequently been applied to explain entrepreneurship as a series of definitive thought processes in which entrepreneurs perceive their abilities to be superior to those of other people, and hence they reason that their abilities can be applied to achieve favourable outcomes (Neck, Neck, Manz & Godwin, 1999; Zhao, Seibert, & Hills, 2005). Markman et al. (2002) determined that general self-efficacy can be applied to entrepreneurship, and it has been used to link inventors with people who establish new ventures. We thus proposed the fourth hypothesis:

**Hypothesis 4:** Self-efficacy predicts entrepreneurial intention.

Regarding the interactive effects amongst these psychological factors, previous research has indicated that human motivation affects cognitive resources and vice versa (Liang, Hsu, & Chang, 2013). Positive and negative emotions affect each other (Waugh, 2013), and self-efficacy and negative emotion also exhibit a mutual influence (Lightsey, Maxwell, Nash, Rarey, & McKinney, 2011). Therefore, we proposed the following four hypotheses:

**Hypothesis 5:** Intrinsic motivation and cognitive load interact in predicting entrepreneurial intention.

**Hypothesis 6:** Intrinsic motivation and metacognition interact in predicting entrepreneurial intention.

**Hypothesis 7:** Negative and positive emotions interact in predicting entrepreneurial intention.

**Hypothesis 8:** Negative emotion and self-efficacy interact in predicting entrepreneurial intention.

## **METHOD**

---

This study examined the effects of psychological factors on the entrepreneurial intention of CEE students and tested the interactive effects resulting from these psychological factors. A 9-item entrepreneurial intention scale (EIS) was adopted from Wang, Peng, and Liang (2014), which was based on Liñán and Chen (2009) and Lans et al. (2010). In addition, we adopted a 37-item psychological variable scale (PVS; Wang et al., 2014), which was based on

several international scales (Chen et al., 2001; Harter, 1981; Hsu et al., 2013; Paas & van Merriënboer, 1994; Schraw & Dennison, 1994; Tuccitto et al., 2010). These two scales were scored on a 6-point Likert type scale ranging from 1 (strongly disagree) to 6 (strongly agree). The details regarding the reliability and validity of the survey tools are reported in the following section.

We recruited 815 CEE students from three universities in Taiwan and divided this sample into two groups. The first group consisted of 305 students and was used to confirm the factor structures of the scales. The second group comprised 510 students and was used to test the hypotheses and build a structural model. In the first group, most of them were men (65.57%); 23.61% were freshmen, 25.57% were sophomores, 26.89% were juniors, and 23.93% were seniors. The participants were between 18 and 25 years of age ( $M = 20.54$ ,  $SD = 0.76$ ). In the second group, most of them were men (64.12%); 22.16% were freshmen, 23.73% were sophomores, 26.67% were juniors, and 27.44% were seniors. The participants were between 18 and 27 years of age ( $M = 20.96$ ,  $SD = 0.87$ ).

The research team discussed the scale items with instructors in the target CEE programmes before conducting the survey. A paper questionnaire was administered by trained graduate assistants, either during or immediately after regular class time. Thus, any problems that participants faced when answering the questions could be directly resolved. Identical survey procedures were used to administer the survey in each target programme in the absence of class instructors to decrease social desirability bias (i.e., students may attempt to project a positive self-image to adapt to social norms whilst answering the questions if class instructors are present). Moreover, participation by the students was voluntary, confidential, and anonymous.

## RESULTS

### Confirmatory factor analysis

Confirmatory factor analysis (CFA) with a maximum likelihood estimator was performed using LISREL 8.80 to test the factorial validity of the scales used in this study. We adopted indicators recommended by Hu and Bentler (1999) and Tabachnick and Fidell (2001) to assess the goodness of fit of the model. Regarding the EIS, the two-factor solution yielded a good fit ( $\chi^2 = 223.12$ ,  $df = 26$ ,  $p < .005$ ,  $RMSEA = .080$ ,  $SRMR = .067$ ,  $CFI = .97$ ,  $NFI = .96$ ,  $TLI = .96$ ). The seven-factor solution of the PVS yielded a good fit ( $\chi^2 = 1702.692$ ,  $df = 608$ ,  $p < .005$ ,  $RMSEA = .078$ ,  $SRMR = .072$ ,  $CFI = .94$ ,  $NFI = .91$ ,  $TLI = .93$ ). Table 1 shows the factor loadings and composite reliability result.

According to our data, the analysis of the composite reliability estimates demonstrated that both PVS and EIS exhibited strong internal consistency. For group one ( $n = 305$ ), construct validity was determined on the basis of convergent and discriminant validity. The convergent validity of each factor was tested by assessing the standardised factor loadings (Hair, Black, Babin, & Anderson, 2010). Discriminant validity was assessed by calculating the confidence intervals of the interfactor correlation estimates, denoted as  $\phi$  (Bagozzi & Yi, 1998). The results indicated that both convergent and discriminant validity were assured.

**Table 1.** The CFAs of PVS and EIS ( $n = 305$ )

Item/ Factor	Psychological Variable Scale							Entrepreneurial Intention Scale	
	Intrinsic motiva- tion	Extrinsic motiva- tion	Positi- ve emo- tion	Negati- ve emo- tion	Cogniti- ve load	Meta- cogni- tion	Self- efficacy	Convic- tion	Prepara- tion
1	0.72	0.62	0.81	0.67	0.56	0.53	0.61	0.85	0.90
2	0.74	0.68	0.80	0.73	0.60	0.75	0.77	0.90	0.91
3	0.72	0.51	0.83	0.63	0.87	0.73	0.69	0.78	0.68
4	0.77		0.72	0.85	0.86	0.77	0.76	0.76	
5			0.81	0.83		0.80	0.82	0.73	
6						0.79	0.83	0.72	
7						0.67	0.81		
8						0.65	0.74		
Compo- site re- liability	0.827	0.635	0.895	0.863	0.820	0.893	0.915	0.909	0.875

### Interactive effects

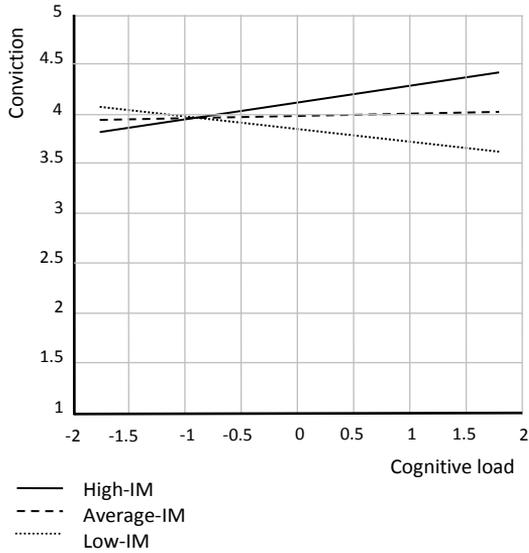
For group two, the hypotheses of interactive effects were tested using LISREL 8.80. Simple slopes and regression lines for each level of the first moderator (intrinsic motivation) were calculated to further examine the form of the interaction for interpreting the interactive effects. The results revealed that the entrepreneurial conviction of CEE students with high intrinsic motivation (high-IM, one standard deviation above the mean) was lower than that of those with low intrinsic motivation (low-IM, one standard deviation below the mean) at low levels of cognitive load. However, at high levels of cognitive load, the entrepreneurial conviction of the high-IM students largely exceeded that of the low-IM students (Figure 1). Regarding the interactive effect resulting from intrinsic motivation and cognitive load on entrepreneurial preparation,

the pattern was similar (Figure 2). Therefore, Hypothesis 5 was supported. The interactive effect on entrepreneurial conviction was higher than that on entrepreneurial preparation.

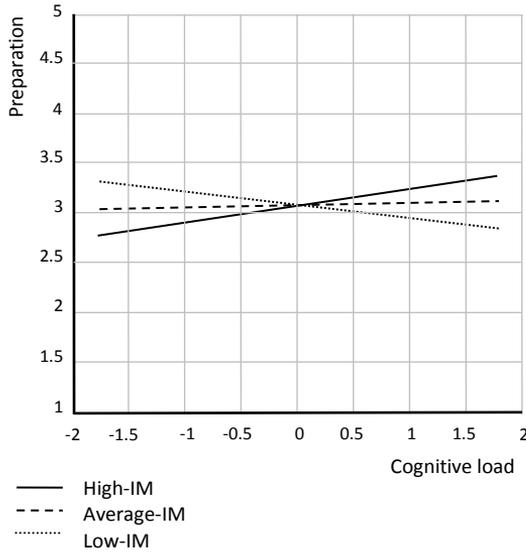
In addition, the results showed that the entrepreneurial conviction of the high-IM students was higher than that of the low-IM students when metacognition was low. However, at high levels of metacognition, the entrepreneurial conviction of the low-IM students approximated the same level of the high-IM students (Figure 3). The entrepreneurial conviction of the high-IM students appeared stable regardless of the level of their metacognition. The interactive effect resulting from intrinsic motivation and metacognition on entrepreneurial preparation was nonsignificant. Therefore, Hypothesis 6 was partially supported.

Simple slopes and regression lines for each level of the second moderator (negative emotion) were calculated to further examine the interactive effects. The results showed that the entrepreneurial conviction of CEE students with low negative emotion (high-NE, one standard deviation above the mean) was lower than that of those with high negative emotion (low-NE, one standard deviation below the mean) at low levels of positive emotion. However, at high levels of positive emotion, the entrepreneurial conviction of the low-NE students was higher than that of the high-NE students (Figure 4). The levels of entrepreneurial conviction of middle-NE students were stable regardless of whether the levels of positive emotion changed. Regarding the interactive effect resulting from negative and positive emotion on entrepreneurial preparation, the pattern was similar (Figure 5). The levels of entrepreneurial preparation of middle-NE students decreased in response to increased levels of positive emotion. Therefore, Hypothesis 7 was supported.

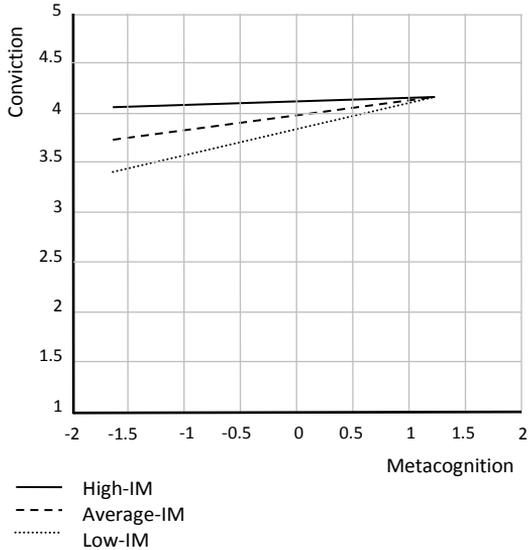
The results showed that the entrepreneurial conviction of the high-NE students was lower than that of the low-NE students when self-efficacy was low. However, at high levels of self-efficacy, the entrepreneurial conviction of the high-NE students was considerably higher than that of the low-NE students (Figure 6). In addition, the levels of entrepreneurial preparation of both high-NE and low-NE students were the same when self-efficacy was low. At high levels of self-efficacy, the entrepreneurial preparation of the high-NE students was considerably higher than that of the low-NE students (Figure 7). Therefore, Hypothesis 8 was supported. The interactive effect on entrepreneurial conviction was higher than that on entrepreneurial preparation.



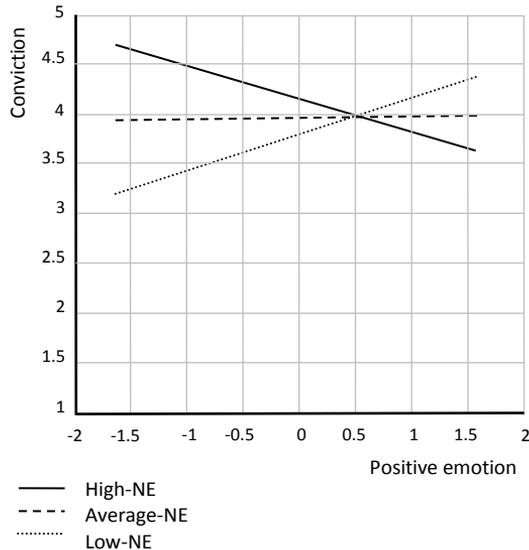
**Figure 1.** Plots of the interactive effects of intrinsic motivation and cognitive load on entrepreneurial conviction (n = 510)



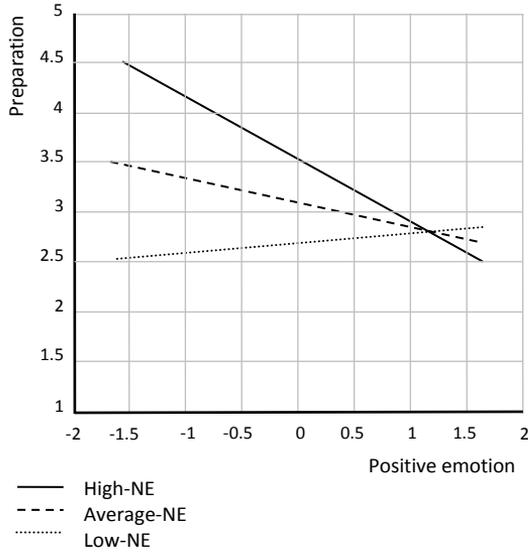
**Figure 2.** Plots of the interactive effects of intrinsic motivation and cognitive load on entrepreneurial preparation (n = 510)



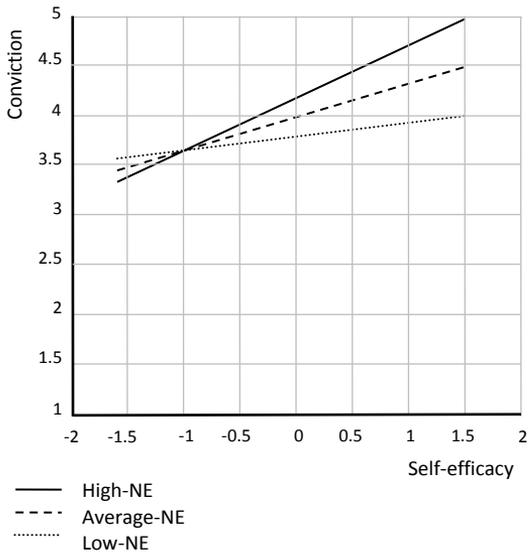
**Figure 3.** Plots of the interactive effects of intrinsic motivation and metacognition on entrepreneurial conviction ( $n = 510$ )



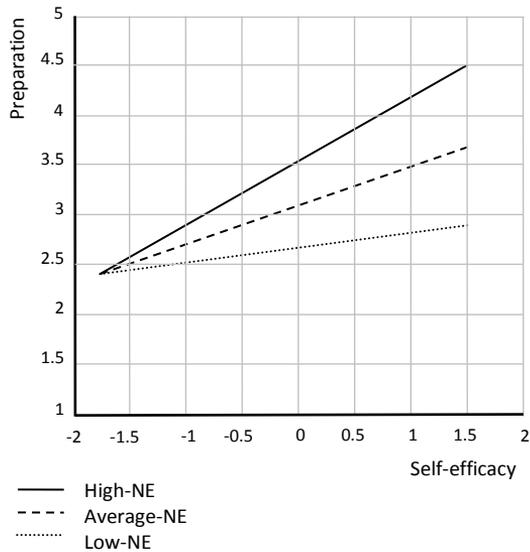
**Figure 4.** Plots of the interactive effects of negative emotion and positive emotion on entrepreneurial conviction ( $n = 510$ )



**Figure 5.** Plots of the interactive effects of negative emotion and positive emotion on entrepreneurial preparation (n = 510)



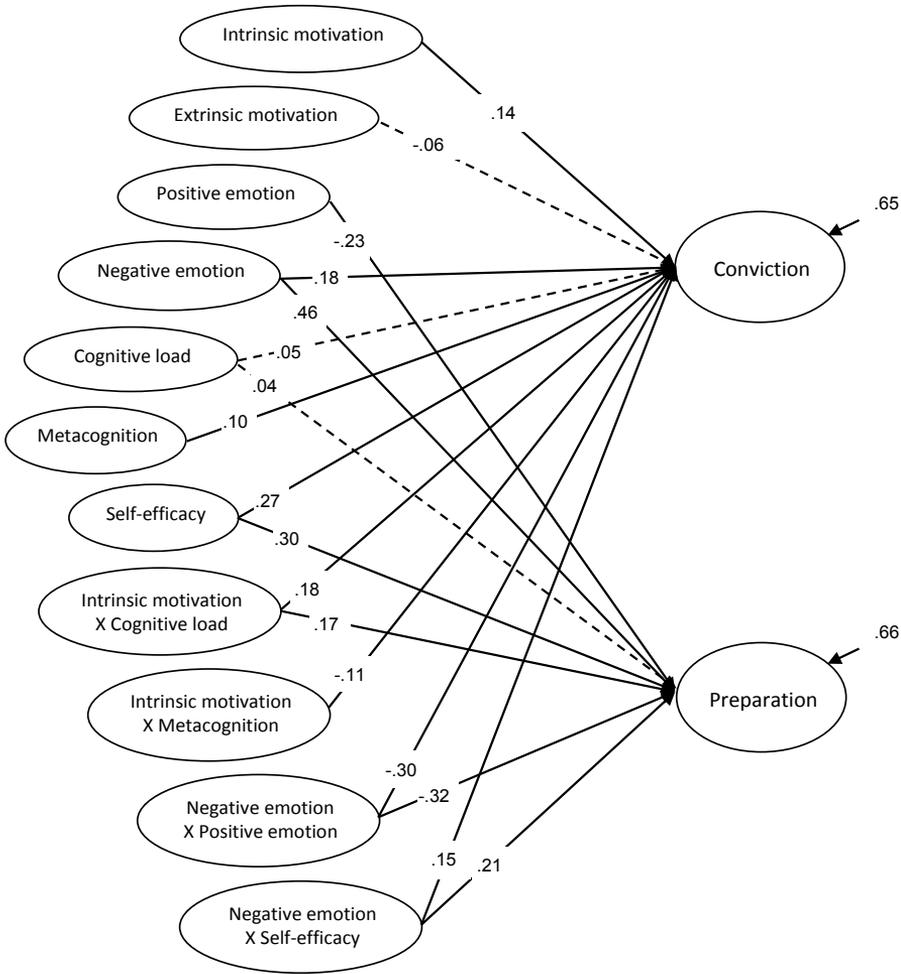
**Figure 6.** Plots of the interactive effects of negative emotion and self-efficacy on entrepreneurial conviction (n = 510)



**Figure 7.** Plots of the interactive effects of negative emotion and self-efficacy on entrepreneurial preparation (n = 510)

### Structural model

The hypotheses were tested using LISREL and by performing structural equation modelling with maximal likelihood estimation. The results showed that the model fit was adequate ( $\chi^2 = 5332.29$ ,  $df = 1994$ ,  $p < .005$ ,  $RMSEA = .057$ ,  $SRMR = .055$ ,  $CFI = .94$ ,  $NFI = .91$ ,  $TLI = .94$ ). The results enabled explaining a substantial level of variance for entrepreneurial conviction ( $R^2 = .35$ ), and entrepreneurial preparation ( $R^2 = .34$ ). Figure 8 depicts the structural model. The solid lines indicate a significant effect, whereas the dotted lines indicate a nonsignificant effect. Table 2 lists the correlations amongst the latent independent variables.



**Figure 8.** Moderating model depicting the relationship between the psychological factors and entrepreneurial intention ( $n = 510$ )

**Table 2.** Correlation of latent independent variables

Variables	1	2	3	4	5	6	7	8	9	10	11
Intrinsic motivation	1										
Extrinsic motivation	.18	1									
Positive emotion	.60	.45	1								
Negative emotion	.23	.11	.06	1							
Cognitive load	.02	.32	.15	.27	1						

---

Metacognition	.71	.21	.50	.29	.12	1					
Self-efficacy	.73	.18	.55	.30	.09	.74	1				
Intrinsic motivation x Cognitive load	.12	.10	.00	.20	.21	.11	.06	1			
Intrinsic motivation x Metacognition	.07	-.01	.14	.02	.10	.13	.09	-.02	1		
Negative emotion x positive emotion	.08	-.01	-.09	.54	.06	.13	.03	.25	.07	1	
Negative emotion x Self-efficacy	.04	.14	.02	.33	.14	.06	.02	.17	.25	.57	1

---

Note: \* $p < .05$ .

According to the data, intrinsic motivation positively predicted entrepreneurial conviction, whereas extrinsic motivation had no significantly direct effects on both entrepreneurial conviction and preparation. Therefore, Hypothesis 1 was partially supported. The effect of positive emotion on entrepreneurial conviction was nonsignificant, whereas the effect of positive emotion on entrepreneurial preparation was significantly negative. Negative emotion positively predicted both entrepreneurial conviction and preparation. Therefore, Hypothesis 2 was partially supported. In addition, the direct effects of cognitive load on both entrepreneurial conviction and preparation were nonsignificant, whereas the direct effects of metacognition on both entrepreneurial conviction and preparation were significant. Therefore, Hypothesis 3 was partially supported. Finally, self-efficacy positively predicted both entrepreneurial conviction and preparation. Therefore, Hypothesis 4 was supported.

---

## DISCUSSION

### Direct effects

Through the CFA, this study concludes that the entrepreneurial intentions of Taiwanese CEE students comprise two factors (conviction and preparation), thus supporting the findings of previous studies (Liñán & Chen, 2009; Wang et al., 2014). In this study, conviction refers to a strong belief or opinion towards entrepreneurial career commitment, and preparation refers to the activities or processes that prepare a person for entrepreneurship.

The current study contributes to an understanding regarding the levels of influences of psychological factors on the entrepreneurial intentions of CEE students. According to the results regarding direct effects, self-efficacy influenced entrepreneurial conviction the most, followed by negative emotion, intrinsic motivation, and metacognition. By contrast, negative emotion influenced entrepreneurial preparation the most, followed by

self-efficacy and positive emotion (a negative effect). Previous studies have indicated that metacognition is necessary for entrepreneurial performance (Frese, 2006; Haynie et al., 2010), though its effect was significant only on entrepreneurial conviction in this study. The function of metacognition is bridging the gap between intention and action (Van Gelderen, 2009), but its effect was nonsignificant on entrepreneurial preparation; this is a crucial topic that requires further research.

Regarding practical implications, the results indicate that CEE educators should encourage students and assist them in building their efficacy to engage in entrepreneurial activities. Educators should consider linking their students' negative emotions and intrinsic motivations to stimulate their entrepreneurial intentions and foster their entrepreneurial behaviour. Goethner et al. (2012) indicated that entrepreneurial intentions enabled forecasting entrepreneurial behaviour. Possible strategies for CEE educators to enhance student self-efficacy beneficial for fostering entrepreneurial behaviour include constructing challenging and proximal goals, setting appropriate task demands and expectations, demonstrating confidence in students, and promptly recognising and praising effort. Strategies related to negative and positive emotions can include promoting undesirable attitudes towards the current status of the job market, unsatisfied quality of life in the workplace, relieving mental strain towards career choice, and decreasing the fear of failure in entrepreneurship. Strategies for enhancing intrinsic motivation can include arousing student curiosity and interest, encouraging students to work purposefully, offering various self-monitoring tasks, and encouraging feedback.

### **Interactive effects**

The results of the interactive effect resulting from intrinsic motivation and cognitive load on entrepreneurial intention reveal that the levels of intention of high-IM (high intrinsic motivation) students increase in response to increased levels of cognitive load. However, the levels of intention of low-IM students decrease in response to increased levels of cognitive load. Therefore, the entrepreneurial intention of students is greatly influenced by intrinsic motivation, considering the impact of cognitive load. In addition, the results of the interactive effect caused by intrinsic motivation and metacognition on entrepreneurial conviction indicate that the entrepreneurial conviction of students exhibiting low levels of intrinsic motivation was particularly beneficial when their metacognitive capacity increased.

The results of the interactive effect caused by negative emotion and positive emotion on entrepreneurial intention reveal that the levels of

intention of high-NE (high negative emotion) students decrease in response to increased levels of positive emotion. However, the levels of intention of low-NE students increase in response to increased levels of positive emotion. Therefore, positive emotion may serve as a trigger to facilitate the entrepreneurial intention of low-NE students, but not of high-NE students. Furthermore, the results of the interactive effect caused by negative emotion and self-efficacy on entrepreneurial intention reveal that the levels of intention of both high-NE and low-NE students increase in response to increased levels of self-efficacy. The increase of high-NE students' intention is stronger than that of low-NE students.

Regarding practical implications, our findings suggest that cognitive load is not a critical factor affecting entrepreneurial intention, if intrinsic motivation remains at a high level. Thus, CEE educators should focus on encouraging low intrinsic-motivation students to increase their metacognitive capacity. According to the link between entrepreneurial intention and behaviour, proposed by Goethner et al. (2012), possible strategies for enhancing metacognition include activating background knowledge, assisting students in goal setting, facilitating practice in planning and monitoring, and supporting student self-regulatory processes. Our findings also indicate that negative emotion reliably predict entrepreneurial intention, but suggest that students exhibiting various levels of negative emotion require different strategies to facilitate their entrepreneurial intention. CEE educators should pay attention not only to negative emotion (such as unsolicited attitudes towards their current employment status) and self-efficacy but also to the combined strategy of these two psychological factors to stimulate their entrepreneurial conviction and pursue their goals.

### **Conclusion, research limitations, and future research**

This study could serve as a reference for initiating a wide exploration of relevant topics from the perspective of entrepreneurship. The results of this study provide several valuable conclusions. First, self-efficacy exerted the strongest direct effects on entrepreneurial conviction, followed by negative emotion, intrinsic motivation, and metacognition. Negative emotion exerted the strongest direct effects on entrepreneurial preparation, followed by self-efficacy and positive emotion. In addition, an increase in cognitive load increases the entrepreneurial intention of students exhibiting high intrinsic motivation and reduces the intention of students exhibiting low intrinsic motivation. An increase in metacognition increases the entrepreneurial conviction of students exhibiting either high or low intrinsic motivation. Moreover, an increase in positive emotion decreases the entrepreneurial

intention of students exhibiting high negative emotion and increases the intention of students exhibiting low negative emotion. An increase in self-efficacy increases the entrepreneurial intention of students exhibiting either high or low negative emotion.

Although this study expands the findings of previous research, it is not without limitations. First, we used self-reported scales for empirical validity and to simplify the process of administering the surveys; this may have caused common method bias. The survey employed in this study contained no sensitive questions, and the consistency of research results between the CFA in this study and that of previous studies supports the factor structure of the measures. Based on both studies of Podsakoff, MacKenzie, Lee, and Podsakoff (2003) and Malhotra, Kim, and Patil (2006), we adopted simple measures, carefully selected instruments, and offered necessary feedback after a survey to decrease this bias and to minimize this limitation. Second, we used the data of 815 CEE students from three universities in Taiwan. Further studies should use a larger sample or conduct international comparisons to discuss the possible differences resulting from regional distribution, as indicated by Obschonka et al. (2013).

Third, we did not adopt the leading established intention models in entrepreneurship research, such as Shapiro's entrepreneurial event model or the models of Ajzen and Fishbein, because we did not want to mimic current research; rather, we sought to explore alternative approaches. In addition, because the research subjects of the present study were university students, the selection of psychological factors in this study was based on the perspective of educational psychology rather than on entrepreneurship models or research. Fourth, previous studies have indicated that gender and cultural concerns influence entrepreneurial intention (Goethner et al., 2012; Obschonka et al., 2013). Although these concerns were not the focus of the present study, they warrant further investigation, particularly to test whether gender plays a moderating role, and to analyse the impact of diverse socio-cultural and economic factors.

The results of this study provide a basis for further testing the relationship between entrepreneurial intentions and entrepreneurial practices. Fayolle et al. (2006) asserted that entrepreneurial intention could function as a catalyst for action; hence, we considered the following questions. First, how can entrepreneurial intentions stimulate realistic practices? Second, what if we treat negative emotion or self-efficacy as a mediator in the structural model? Third, do domains differ amongst CEE programmes regarding the relationship between the psychological factors and entrepreneurial intentions examined in this study? If so, what are the implications of these differences? We

---

anticipate that the answers to these questions will yield insights into educational strategies for CEE education.

### **Closing remarks**

This study is unlike typical studies on entrepreneurship and the CEE engineering profession in particular. The results provide several contributions to CEE and entrepreneurship education. First, few studies have thoroughly examined the relationships between psychological factors and entrepreneurial intention in CEE students. This study developed a novel approach, provided evidence regarding this relationship, and discussed the practical implications of the findings. Second, most relevant studies have examined the direct effects of selected psychological factors on entrepreneurial intention, whereas the current study additionally tested the interactive effects amongst psychological factors on entrepreneurial intention. Third, entrepreneurship is crucial because it facilitates economic efficiency, innovative product and service development, and new employment opportunities. Enhancing student interest and career choice in professional practice is amongst the primary goals of engineering educators. However, engineering colleges have not acknowledged the importance of entrepreneurship. This study clarifies the facilitative role that psychological factors can play in enhancing entrepreneurial intention.

The findings of this study are sufficiently promising to warrant further inquiry into this topic. Technopreneurship cannot be achieved without feasible entrepreneurial intentions. Entrepreneurial intentions cannot be facilitated without a careful consideration of the interplay of diverse psychological factors. The findings of this study are intended as a reference for initiating a wider exploration of this topic.

### **References**

- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(6), 179-211.
- Bagozzi, R. P., & Phillips, L. W. (1982). Representing and testing organizational theories: A holistic construal. *Administrative Science Quarterly*, 27(3), 459-489.
- Bandura, A. (2000). Cultivate self-efficacy for personal and organizational effectiveness. In E. A. Locke (Ed.), *Handbook of principles of organization behaviour* (pp. 120-136). Oxford, UK: Blackwell.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *The Academy of Management Review*, 13(3), 442-453.

- Cardon, M. S., Foo, M.-D., Shepherd, D., & Wiklund, J. (2012). Exploring the heart: Entrepreneurial emotion is a hot topic. *Entrepreneurship Theory and Practice*, 36(1), 1-10.
- Carsrud, A., & Brännback, M. (2012). Entrepreneurial motivations: What do we still need to know? *Journal of Small Business Management*, 49(1), 9-26.
- Chen, L. (2013). IT entrepreneurial intention among college students: An empirical study. *Journal of Information Systems Education*, 24(3), 233-243.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4(1), 62-83.
- Chen, L. (2013). IT entrepreneurial intention amongst college students: An empirical study. *Journal of Information Systems Education*, 24(3), 233-243.
- Chen, S.-C., & Chen, H.-H. (2015). How does creativity mediate the influence of personality traits on entrepreneurial intention? A study of multimedia engineering students. *Journal of Information Communication*, 5(2), 73-86.
- Choi, J. N., Price, R. H., & Vinokur, A. D. (2003). Self-efficacy changes in groups: Effects of diversity, leadership & group climate. *Journal of Organizational Behaviour*, 24(4), 357-372.
- Cooper, A. C., & Dunkelberg, W. C. (1986). Entrepreneurship and paths to business ownership. *Strategic Management Journal*, 7(1), 53-68.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Dej, D. (2008). The nature of entrepreneurial motivation. In J. A. M. Leon, M. Gorgievski, & M. Lukes, *Teaching psychology of entrepreneurship: Perspective from six European countries* (pp. 81-102). Madrid, Spain: Universidad Nacional de Educación a Distancia Madrid.
- Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: A new methodology. *Journal of European Industrial Training*, 30(9), 701-720.
- Frese, M. (2006). The psychological actions and entrepreneurial success: An action theory approach. In J. R. Baum, M. Frese, & R. A. Baron (Eds.). *The Psychology of Entrepreneurship*. Lawrence Erlbaum: SIOP Frontier Series.
- George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, 53(8), 1027-1055.
- Goethner, M., Obschonka, M., Silbereisen, R. K., & Cantner, U. (2012). Scientists' transition to academic entrepreneurship: Economic and psychological determinants. *Journal of Economic Psychology*, 33(3), 628-641.

- Gerba, D. T. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, 3(2), 258-277.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective*. Upper Saddle River, NJ: Pearson/Prentice Hall.
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology*, 17(3), 300-312.
- Haynie, J. M., Shepherd, D. A., Mosakowski, E., & Eagly, P. C. (2010). A situated metacognitive model of the entrepreneurial mindset. *Journal of Business Venturing*, 25(2), 217-229.
- Haynie, J. M., Shepherd, D. A., & Patzelt, H. (2012). Cognitive adaptability and an entrepreneurial task: The role of metacognitive ability and feedback. *Entrepreneurship Theory and Practice*, 36(2), 237-265.
- Hsu, Y., Liang, C., & Chang, C.-C. (2014). The mediating effects of generative cognition on imagination stimulation. *Innovations in Education and Teaching International*, 51(5), 544-555.
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55.
- Kaltenecker, N., & Hörndlein, C. (2013). The drivers of entrepreneurial intentions: An empirical study amongst information systems and computer science students. *Proceedings of the Nineteenth Americas Conference on Information Systems*, Chicago, Illinois, August 15-17, 2013.
- Kamau-Maina, R. (2008). Encouraging entrepreneurial intentions: The role of university/college environments and experiences. Weatherhead School of Management, Case Western Reserve University, Retrieved 26 December, 2014, <http://digitalcase.case.edu:9000/fedora/get/ksl:weaedm131/weaedm131.pdf>
- Klincewicz, K. (2012). Political perspective on technology alliances: the case of Microsoft and Google. *Journal of Entrepreneurship, Management and Innovation*, 8(1), 5-34.
- Lans, T., Gulikers, J., & Batterink, M. (2010). Moving beyond traditional measures of entrepreneurial intentions in a study amongst life-sciences' students in the Netherlands. *Research in Post-Compulsory Education*, 15(3), 259-274.
- Leon, J. A. M., Gorgievski, M., & Lukes, M. (2008). *Teaching psychology of entrepreneurship: Perspective from six European countries*. Madrid, Spain: Universidad Nacional de Educación a Distancia Madrid.
- Liang, C., Hsu, Y., & Chang, C.-C. (2013). Intrinsic motivation as a mediator on imaginative capability development. *Thinking Skills and Creativity*, 8(1), 109-119.

- Liang, C.-T., Chia, T.-L., & Liang, C. (2015). Effect of personality differences in shaping entrepreneurial intention. *International Journal of Business and Social Science*, 6(4.1), 166-176.
- Lightsey, O. R., Maxwell, D. A., Nash, T. M., Rarey, E. B., & McKinney, V. A. (2011). Self-control and self-efficacy for affect regulation as moderators of the negative affect-life satisfaction relationship. *Journal of Cognitive Psychotherapy*, 25(2), 142-154.
- 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.
- Malhotra, N. K., Kim, S. S., & Patil, A. (2006). Common method variance in IS research: A comparison of alternative approaches and a reanalysis of past research. *Management Science*, 52(12), 1865-1883.
- Markman, G. D., Balkin, D. B., & Baron, R. A. (2002). Inventors and new venture formation: The effects of general self-efficacy and regretful thinking. *Entrepreneurship Theory and Practice*, 27(2), 149-165.
- Ministry of Education (2015). Important Statistics. Retrieved 30 December, 2014, <http://www.edu.tw/pages/detail.aspx?Node=4076&Page=20047&Index=5&WID=31d75a44-efff-4c44-a075-15a9eb7aecdf>.
- Murah, M. Z., & Abdullah, Z. (2012). Entrepreneurial intentions amongst computer science students at Faculty of Information Science and Technology: An empirical study. *Procedia - Social and Behavioural Sciences*, UKM Teaching and Learning Congress.
- Neck, C. P., Neck, H. M., Manz, C. C., & Godwin, J. (1999). "I think I can; I think I can": A self-leadership perspective toward enhancing entrepreneur through patterns, self-efficacy, and performance. *Journal of Managerial Psychology*, 14(6), 477-501.
- Obschonka, M., Schmitt-Rodermund, E., Silbereisen, R. K., Gosling, S. D., & Potter, J. (2013). The regional distribution and correlates of an entrepreneurship-prone personality profile in the United States, Germany, and the United Kingdom: A socioecological perspective. *Journal of Personality and Social Psychology*, 105(1), 104-122.
- Ooi, Y. K., & Ahmad, S. (2012). A study amongst university students in business startups in Malaysia: Motivations and obstacles to become entrepreneurs. *International Journal of Business and Social Science*, 3(19), 181-192.
- Paas, F. G. W. C., & van Merriënboer, J. J. G. (1994). Instructional control of cognitive load in the training of complex cognitive tasks. *Educational Psychology Review*, 6(4), 351-371.
- Patzelt, H., & Shepherd, D. A. (2011). Negative emotions of an entrepreneurial career: Self-employment and regulatory coping behaviours. *Journal of Business Venturing*, 26(2), 226-238.
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, 25(5), 479-510.

- Podoyntsyna, K., Van der Bij, H., & Song, M. (2012). The role of mixed emotions in the risk perception of novice and serial entrepreneurs. *Entrepreneurship Theory and Practice*, 36(1), 115-140.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioural research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Prodan, I. & Drnovsek, M. (2010). Conceptualizing academic-entrepreneurial intentions: An empirical test. *Technovation*, 30(5-6), 332-347.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55(1), 68-78.
- Sánchez, J. C. (2012). Entrepreneurial intentions: The role of the cognitive variables. In T. Burger-Helmchen (Ed.). *Entrepreneurship: Born, made and educated* (pp. 27-50). New York: InTech.
- Schraw, G. & Dennison, R.S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, 19, 460-475.
- Shane, S. (2004). Encouraging university entrepreneurship? The effect of the Bayh-Dole Act on university patenting in the United States. *Journal of Business Venturing*, 19(1), 127-151.
- Szirmai, A., Naude, W., & Goedhuys, M. (2011)(Eds.). *Entrepreneurship, innovation, and economic development*. Oxford University Press.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4<sup>th</sup> ed.). Boston, MA: Allyn and Bacon.
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669-694.
- Tuccitto, D. E., Giacobbi, Jr., P. R., & Leite, W. (2010). The internal structure of positive and negative affect: A confirmatory factor analysis of the PAMAS. *Educational and Psychological Measurement*, 70, 125-141.
- Urban, B. (2012). Applying a metacognitive perspective to entrepreneurship: Empirical evidence on the influence of metacognitive dimension on entrepreneurial intentions. *Journal of Enterprising Culture*, 20(2), 203-225.
- Van Gelderen, M. (2009). From entrepreneurial intention to action initiation. Retrieved 21 December, 2014, <http://sbaer.uca.edu/research/icsb/2009/paper2.pdf>
- Vesalainen, J., & Pihkala, T. (1999). Motivation structure and entrepreneurial intentions. Retrieved 30 December, 2014, [http://fusionmx.babson.edu/entrep/fer/papers99/II/II\\_B/IIB.html](http://fusionmx.babson.edu/entrep/fer/papers99/II/II_B/IIB.html)
- Wang, J.-H., Peng, L.-P., & Liang, C. (2014). Developing and testing the psychological influence, rural practice, and entrepreneurial intention scales. *Review of Agricultural Extension Science*, 31, 72-95.
- Waugh, C. E. (2013). The regulatory power of positive emotions in stress: A temporal functional approach. In Kent, M., M. C. Davis, & J. W. Reich

- (Eds.) *The resilience handbook: Approaches to stress and trauma* (pp. 74-75). London, UK: Routledge.
- Welpel, I. M., Spörrle, M., Grichnik, D., Michl, T., & Audretsch, D. B. (2012). Emotions and opportunities: The interplay of opportunity evaluation, fear, joy, and anger as antecedent of entrepreneurial exploitation. *Entrepreneurship Theory and Practice*, 36(1), 69-96.
- Zain, Z. M., Akram, A. M., & Ghani, E. K. (2010). Entrepreneurship intention among Malaysian business students. *Canadian Social Science*, 6(3), 34-44.
- Zakarevičius, P., & Župerka, A. (2010). Experience of emotional intelligence development of students' entrepreneurship. *Economics and Management*, 15, 865-873.
- Zhao, H., Seibert, S. & Hills, G. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265-1272.

### **Abstrakt (in Polish)**

Liczni przedsiębiorcy w dziedzinie zaawansowanych technologii (techno-przedsiębiorcy), rozpoczynają działalność w okresie studiów, lecz działalność przedsiębiorcza studentów wydziałów inżynierii elektrycznej i komputerowej (CEE) jest niedostatecznie zbadana. W tym badaniu analizowano zarówno połączone jak i interaktywne efekty czynników psychologicznych na intencje przedsiębiorcze studentów (CEE). W tej pracy, intencje przedsiębiorcze składają się na dwa wymiary: przekonanie i przygotowanie. W odniesieniu do skutków bezpośrednich, wyniki wskazują, że poczucie własnej skuteczności wpływa najbardziej na przekonanie o przedsiębiorczości, po którym następują negatywne emocje, motywacja wewnętrzna oraz metapoznanie. Negatywne emocje najmocniej wpłynęły na przygotowanie do podjęcia działań przedsiębiorczych, a następnie na poczucie własnej skuteczności i pozytywne emocje. Wyniki wykazały również kilka istotnych efektów interaktywnych wynikających z czynników psychologicznych. Wzrost obciążenia poznawczego wzmocnił zamierzenie przedsiębiorczości studentów wykazujących dużą wewnętrzną motywację, a osłabił intencje studentów ze słabą wewnętrzną motywację. Wzrost metapoznania zwiększył przekonanie przedsiębiorczości zarówno studentów wykazujących mocną lub słabą motywację wewnętrzną. Wzrost pozytywnych emocji wpłynął na osłabienie intencji przedsiębiorczości u studentów wykazujących wysoki poziom negatywnych oraz podniósł intencję u studentów z niskim poziomem negatywnych emocji. Wzrost poczucia własnej skuteczności wzmocnił intencje przedsiębiorczości u studentów wykazujących wysoki bądź niski poziom negatywnych emocji.

**Słowa kluczowe:** inżynieria elektryczna i komputerowa (CEE), intencje przedsiębiorcze, efekty interaktywne, czynniki psychologiczne, studenci.

### **Biographical notes**

**Chao-Tung Liang** is an Assistant Professor in the Department of Cultural Creativity and Digital Media Design, Lunghwa University of Science and

Technology, Taoyuan, Taiwan. He gained his Master degree in the Radio and Television program at the National Taiwan University of Arts, Taiwan. His current research interests focus on: communication education, multimedia design, media psychology, and entrepreneurship. Assistant Professor Liang can be reached via [liangdondon@gmail.com](mailto:liangdondon@gmail.com).

**Dr. Chaoyun Liang** is a Professor in the Department of Bio-Industry Communication and Development, National Taiwan University, Taipei, Taiwan. He gained his PhD in the Instructional Systems Technology program at the Indiana University, USA. His current research interests focus on: imagination & creativity, entrepreneurship & social enterprise, and agrirural communication & marketing. Professor Liang can be reached via [cliang@ntu.edu.tw](mailto:cliang@ntu.edu.tw).



---

# The Mediating Effect Of Self-Efficacy on the Relationship Between Entrepreneurship Education and Entrepreneurial Intentions of University Students

Jacob L. Oyugi<sup>1</sup>

---

## **Abstract**

*This paper has been written using data derived from a major study conducted by Oyugi (2011). The study investigated the contribution of entrepreneurship education to the development of entrepreneurial self-efficacy and intentions among university students in Uganda. The paper recognizes the development and the teaching of entrepreneurship courses in most universities in Uganda with the aim of rolling out students sufficiently equipped to become job creators. At a time when efforts are being made to address graduate unemployment through mainstream training in entrepreneurial skills in post-primary and post-secondary education, this paper provides timely guidance on the entrepreneurial curriculum. It proposes a quantitative analysis in which entrepreneurship education and entrepreneurial self-efficacy are key to developing entrepreneurial intentions of students. To investigate this, two hypotheses were formulated. Data was collected by means of a mail survey questionnaire completed by students, randomly selected from a sampling frame of third year students, who had training in entrepreneurship course. The findings revealed that significant relationships exist between entrepreneurship education and entrepreneurial intention, while self-efficacy was found to partially mediate the entrepreneurship education and entrepreneurial intention.*

**Keywords:** entrepreneurship education, entrepreneurial self-efficacy, entrepreneurial intention, mediation, university students.

---

## **INTRODUCTION**

The paper set out to investigate and test the statistical relationship between entrepreneurial intentions of students and entrepreneurship education in

---

<sup>1</sup> Jacob L. Oyugi , Ph.D., School of Management and Entrepreneurship, Kyambogo University, Kampala – Uganda. P.O Box 1, Kyambogo-Uganda. E-mail: joyugi@kyu.ac.ug.

---

universities in Uganda. In view of the fact that a bigger study considered course objectives and method of course delivery together with course content, this paper focuses on the mediating effect of self-efficacy on the relationship between entrepreneurship education and entrepreneurial intentions. One of the objectives of the PhD thesis, therefore, was to examine the mediation of self-efficacy between entrepreneurship education and entrepreneurship intentions of university students. Specifically, this study had two objectives (1) determining the significant relationship between entrepreneurship education and entrepreneurial intentions, and (2) determining the mediating effect of entrepreneurial self-efficacy on the relationship between entrepreneurship education and entrepreneurial intentions among university students.

The paper starts by presenting the literature review, followed by methodology. Thirdly, the results are presented and discussed. The fourth part draws conclusion. Finally, the paper highlights the limitations of the study.

## LITERATURE REVIEW

---

### **Entrepreneurial self-efficacy**

This section covers the underpinning theory of self-efficacy, and helps to explain why it is important to develop entrepreneurship skills. To increase levels of entrepreneurship motivation, it is proposed that it is essential that entrepreneurship education programme influence self-efficacy of individuals so that they learn and persist in the pursuit of entrepreneurship (Lucas and Cooper, 2004).

Self-efficacy as a construct is conceived by Bandura (1986) as one's judgment of ability to execute an action, and is therefore a largely perceived construct. This construct is established as a reliable predictor of a wide variety of goal directed behaviors. Chen, Greene and Crick (1998, after: Lee, 2005) defined self-efficacy in the context of entrepreneurship as the strength of a person's belief that he or she is capable of successfully performing the various roles and tasks of entrepreneurship. The authors reported that self-efficacy is positively related to one's intention in setting up a business.

Krueger and Dickson (1994, p.94) postulated that high levels of self-efficacy are associated with strategic risk taking while Krueger et al (2000) argued that self-efficacy is a critical antecedent of entrepreneurial intent. Individuals with high self-efficacy have more intrinsic interests in entrepreneurial tasks, and are more willing to make an effort and show persistence when faced with obstacles and setbacks. Self-efficacy influences the choices we make, the effort one puts in, how long one persists at a task and how one feels

about it. If a person believes that the performance of a certain task is within their capability, he/she will act, even if the task is difficult because he/she perceives the successful completion of the task as a feasible goal given the belief in self. Self-efficacy is therefore related to perceptions of feasibility. To this extent self-efficacy mediates entrepreneurial intentions (Zhao, Seibert and Hills, 2005) which are determined by perceptions of feasibility and desirability.

Self-efficacy develops from mastery of experience (enactive mastery) or task accomplishment, vicarious experience (from observing others), verbal persuasion (or encouragement) as well as management of emotional states (Boyd and Vozikis, 1994). In the same way Bandura (1997) asserts that people's conceptions about themselves and the nature of things are developed and verified through four different processes: direct experience, vicarious experience, judgment voiced by others, and derivation of further knowledge by using rules of inference.

Empirical researches such as those by Cox, Mueller, and Moss (2002, 2003) have generated a great number of studies that demonstrate the positive relationship between self-efficacy and different motivational and behavioral outcomes in clinical, educational, and organizational settings. Self-efficacy has also become an important construct in behavioral management and Bandura (1982) defines self-efficacy as people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performance.

As affirmed previously, self-efficacy is linked to initiating and persisting at behaviors under high uncertainty, to setting higher goals and to reducing threat rigidity (Bandura, 1986). Although many studies have found a positive relationship between self-efficacy and performance, studies such as Vancouver (2002) found a strong positive correlation between self-efficacy and performance, at the person level of analysis, yet at a within person, across time level of analysis, self-efficacy is negatively related to subsequent performance. Unlike personality traits self-efficacy can be developed through training and modeling. Efficacy judgments are tasks specific and regulate behaviour by determining task choices, effort and persistence. Self-efficacy also facilitates learning and task performance particularly early in the learning process and can also change as a result of learning, experience and feedback (Gist and Mitchell, 1992).

The foregoing literature explains the relationship between self-efficacy, beliefs and intentions. The explanation is generally on entrepreneurial behavior regardless of educational status. Bandura (1997) on the other hand, enumerates sources of self-efficacy and on close examination it does not say much on entrepreneurship education as an academic discipline which could

be considered a source of self-efficacy. It does not state how entrepreneurship education could be linked to self-efficacy and entrepreneurial intentions of university students. The explanation, therefore, leaves a gap that this study was set to fill.

### **Entrepreneurship education and self-efficacy**

To make a decision to start a venture requires confidence and self-belief that an individual or group of potential founders have in their ability to undertake successfully the many sub-activities that are required. Self-efficacy is central to the willingness to act in an entrepreneurial way, to identify and seize opportunities. High and low levels of self-efficacy have serious consequences for an individual's belief in the ability to perform in a range of situations. High levels of self-efficacy have been linked to various behaviors such as innovation and opportunity recognition in entrepreneurship (Ardichvili et al. 2003).

A person's willingness to act is influenced by the perceived abilities and skills with respect to that area of activity. Several authors (Gorman, 1997; Kolvereid and Moen, 1997; Noel, 2001; Tkachev and Kolvereid, 1999; Varela and Jimenez, 2001) have shown that there is a significant relationship between entrepreneurial education and the propensity of becoming an entrepreneur. An observation which has been confirmed by Noel (2001, p.10) shows that students who graduated in entrepreneurship reached higher scores in entrepreneurial intention and entrepreneurial self-efficacy than students who graduated in other disciplines. Similarly, Varela and Jimenez (2001) indicate that there is a correlation between a university's investment in the promotion of entrepreneurship and the percentage of students becoming entrepreneurs.

However, the literature seems to have paid limited attention to the importance of specific educational variables, such as curriculum design, teaching and assessment. There is insufficient research regarding the outcomes of entrepreneurship education which link it to self-efficacy and intention. This study sought to fill the gap by linking entrepreneurship education, self-efficacy and entrepreneurial intentions. Based on the literature, the following hypothesis was formulated that

there is a statistically significant relationship between entrepreneurship education and self-efficacy.

### **Self-efficacy linked to entrepreneurship**

As the literature review has indicated, self-efficacy is anchored in a model of entrepreneurial potential and linked to entrepreneurial intention. The notion of entrepreneurial potential seems causally prior to intentions (Krueger

---

and Brazeal, 1994), one may have great potential without corresponding intentions. Krueger and Brazeal (1994) offer a model of potential, which situates Shapero's model within the context of the intentions process. One important conclusion by way of their model remains the position of perceived feasibility (self-efficacy). Chen, Greene and Crick (1998, after: De Noble et al, 2000) assert that self-efficacy has a number of practical and theoretical implications for entrepreneurial success because initiating a new venture requires unique skills and mindsets, which may be far different from those required of managers in a fully established organization.

Chen, et al (1998) propose entrepreneurial self-efficacy construct to predict likelihood of individual being an entrepreneur, that is, entrepreneurial self-efficacy refers to strengths of a person's belief of being capable of successfully performing various roles and tasks of an entrepreneur. Those with high entrepreneurial self-efficacy tend to assess the environment as more opportunistic rather than fraught with risks; they believe in ability to influence achievement of goals; and they perceive a low probability of failure. Chen, et al (1998) study based on two-surveys found that entrepreneurial self-efficacy was positively related to the intention to set up one's own business. As interpreted by Chen, et al (1998, p.295), the self-efficacy perspective is highly appropriate for the study of the entrepreneur. Based on the review of the literature, the following hypothesis was postulated:

Self-efficacy mediates the relationship between entrepreneurship education and entrepreneurial intention among university students.

## **METHODOLOGY**

---

### **Study design**

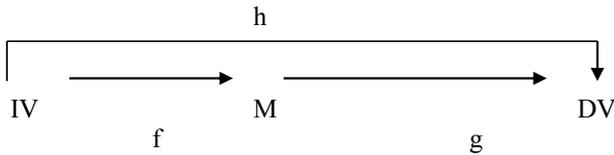
This research employed a mixed methodology approach using quantitative and qualitative design which is highly grounded in the philosophy of social sciences literature. The selection of the design is in line with (Creswell, 2003). The quantitative data was to establish the relationship and its magnitude between entrepreneurship education, self efficacy and entrepreneurial intentions of university students. On the other hand, the research methodology relied on qualitative data where the body of data consisted of texts and narration to help in explaining what was happening in as far as entrepreneurship education in the selected universities was concerned. The choice to collect the data using a combination of methods was based on the idea of triangulation for creating a richer and deeper understanding of the phenomenon as well as increase the validity of the research findings.

**Target population**

Population of interests for the study were university students in their third year (final year of study in Uganda’s university system) who were enrolled into the business programme and had studied entrepreneurship course. These students were targeted due to their enrolment into business programmes which provide indicators that their career interests are skewed towards business related fields. Therefore they would likely choose to become entrepreneurs. The target universities were Makerere Business School, Kampala International University, and Uganda Martyrs University. The three universities were targeted because, by the time this study started, they had been teaching and examining business and entrepreneurship courses for more than five years. A total of 2,223 formed the student population across the three universities. Out of this a sample size of 281 students were randomly selected and used.

**Testing for mediation**

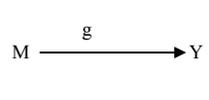
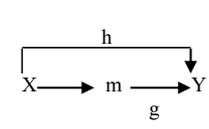
In order to test the mediation effect of self efficacy, Baron and Kenny (1986) four-step regression method was used. Baron and Kenny (1986) proposed a four step approach in which several regression analyses are conducted and significance of the coefficients is examined at each step. Using an illustration, mediation can be depicted in the following way:



Where IV is the independent variable, M is the mediating variable, DV is the dependent variable. The paths (coefficients) are denoted by f, g and h. A summary of the four steps are presented in Table 1.

**Table 1.** A summary of the four-step approach of testing for mediation

	Analysis model	Visual Depiction
Step 1	A simple regression analysis with X (IV) predicting Y (DV) to test for path h alone, $Y = \alpha + \beta X + \epsilon$	
Step 2	A simple regression analysis with X predicting M to test for path f, $M = \alpha + \beta X + \epsilon$	

Step 3	A simple regression analysis with M predicting Y to test the significance of path g alone, $Y = \alpha + \beta_1 M + \epsilon$	
Step 4	A multiple regression analysis with X and M predicting Y to test paths h and g respectively, $Y = \alpha + \beta_1 X + \beta_2 M + \epsilon$	

Source: Baron and Kenny (1986).

In Table 1, the purpose of steps 1 – 3 was to establish that zero-order relationships among the variables exist. If one or more of these relationships are non-significant, researchers usually conclude that mediation is not possible or likely (although this is not always true, MacKinnon, Fairchild, & Fritz, 2007). A significant relationship from steps 1 – 3, led to step 4. Step 4 model, was necessary to ascertain if a full or partial mediation occurred. According to Baron and Kenny (1986) a full mediation occurs if the effect of mediating variable (self-efficacy, path g) remains significant after controlling for independent variable (entrepreneurship education). On the other hand, a partial mediation is deemed to have occurred if the relationship between the independent variable and the dependent variable is still significant after controlling for the effects of the intervening variable (that is, both entrepreneurship education construct and self-efficacy significantly predict entrepreneurial intentions).

### Preparation and data collection procedures

Research instruments in the form of questionnaires were constructed and administered in English since English is the official language of instruction in all universities in Uganda. A pre-test of the survey instrument was conducted at Uganda Christian University, Mukono and Nkumba University, Entebbe, using the final year students. A total of 30 of the final year students were selected in both institutions to participate in the pre-test. Mukono and Nkumba universities were selected for the pre-test because they were not included in the final sample for the actual data collection. The pre-test was basically for further validation in the context of the study as well as determining and correcting possible errors.

Basing on the result of the pre-test, 5 core dimensions were selected and incorporated into the questionnaire for data collection. The detail of the core dimensions and their constructs were as follows: A) Personal Data (gender, age, level and nature of entrepreneurship education offered); B) Contents of Entrepreneurship Education (asking what students had achieved as a result

of the content of entrepreneurship in terms of opportunity seeking behavior, coping with uncertainty, motivation, capability of setting an organization, capacity to see problem as opportunity); C) Objectives (the extent to which students perceive the objectives of entrepreneurship programmes to have been attained in relation to the development of their entrepreneurial intention in terms of: providing specialist knowledge and skills about how to start and manage small businesses, providing specialist knowledge and skills in the development and designing of feasible business plans, creating all round entrepreneurs who can make sound managerial, financial and marketing decisions, providing specialist knowledge and skills about how to develop small businesses and see them grow through medium to large firms); D) Methodology (the extent to which students perceive the methods of entrepreneurship education to have contributed to the development of their entrepreneurial intention) and E) Self-efficacy variable (ability to: achieve goals, accompany a difficult tasks, obtain outcomes that are important, overcome many challenges, set and meet market share goal, engage in new ideas and venturing, reduce risks); Entrepreneurial Intention (asking students whether students had specific ideas for a new business, began taking steps toward starting a business, detailed plan for a new venture, willing to act soon on an opportunity).

All the items were rated on a four-point Likert-like scale ranging from "1" "Not at all" to "4" "Large extent" depending on the perceived degree of confidence of the individual respondent. The students' intentions to start their own businesses were also measured using a 12-item dimension built on Krueger's et al (1999) validated questionnaire. All the 12 items were measured based on a 4-point rating scale ranging from "1" Not at all" to "4" "Large extent". Besides the questionnaire, other data collection tools, such as interview guide and focus group guide, were prepared.

## **METHODS OF DATA COLLECTION**

---

The study based itself on the primary data and secondary data sources. The primary data was required to provide source of new information for the research in progress. On the other hand, the secondary data was necessary to search existing sources of information to complement the primary data as well as to avoid replication of possibly expensive and time-consuming data collection. Based on the study design and the philosophical assumptions, the second dichotomy was that of quantitative and qualitative methods. The quantitative method was to generate numerical data since a large number of cases was involved and also to allow for generalization to a wider population.

On the other hand, the qualitative method was generally used where numerical data was not easy to generate and where a small number of cases was involved. To generate the quantitative and qualitative data, the instruments used consisted of a questionnaire, interview guide and focus group guide. The procedures of administering data collection are presented in the following sub-sections.

### **The questionnaire**

Since one of the objectives of this study was to explain entrepreneurship intention as a dependent variable and self-efficacy as a mediating variable, there was a need to identify valid and reliable measures of the variables. This was done through a literature review of previous studies such as that of Chen et al (1998) and that of Krueger et al (1999). These two studies were based on validated measures of self-efficacy and entrepreneurial intention and, therefore, they were adapted for the purpose of this study.

The questionnaire was designed with further help of entrepreneurial intentions questionnaires validated by earlier researchers like Krueger, et al (2000). The questionnaire was divided into parts, according to the variables of the study as already explained under the section on data collection procedure. The key respondents to the questionnaire were the final year students in the selected universities who had done courses in entrepreneurship. These were selected because they were the recipient of the knowledge of entrepreneurship education.

The questionnaire was subject to validity and reliability test for the purpose of data quality control.

### **Validity test**

A Content Validity Index (CVI) was computed for this purpose using the formula as follows.

$$\text{Content validity index (CVI)} = \frac{\text{Number of items declared valid}}{\text{Total number of items on the questionnaire}}$$

From the pre-test result and view of the supervisor, 91 items out of 112 items were declared valid. The validity index was approximately 0.8 which compares very well with 0.7 which Amin (2005) postulates that if the content validity index is greater than 0.7, it means that the questions are relevant to the study variables.

### Reliability test

Cronbach’s (1994) alpha coefficient test was used to test the reliability of the instrument. Nunnaly (1978) stated that if the Cronbach’s alpha coefficient is 0.5, it is sufficient value, while 0.7 is a more reasonable value. The reliability test was carried out using SPSS package for the entire instrument. The Cronbach’s alpha coefficient was 0.9, implying very high reliability and consistency.

However, to get a clear picture, reliability test for each measure under the different section of the questionnaire was tested using the same method. Table 2 presents the Cronbach’s coefficient alpha reliability measure of internal consistency for each sub-scale.

**Table 2.** Reliability test results for the various measures

Measure	Number of items	Cronbach’s alpha coefficient
Content of entrepreneurship	7	0.71
Objectives	8	0.76
Teaching method	12	0.88
Assessment and Feedback	4	0.87
Self-efficacy measures	15	0.92
Intentions measures	19	0.83
Readiness to be entrepreneurial	7	0.72
Intervening variables	14	0.80
Total Number of items	91	0.92

From Table 2, all sections passed the reliability tests with content of entrepreneurship measures having the lowest coefficient (0.71). However, the average Cronbach’s alpha was 0.81, which reaffirms that each section was reliable in as far as measure of entrepreneurship was concerned.

### ANALYSIS

---

#### Response rate

Quantitative data was collected by way of self-administered questionnaires designed for student respondents. The specific breakout of the composition of the net delivery and net response are broken out as in Tables 3 and 4.

**Table 3.** Composition of net delivery

Item	No. of respondents	Percentage
Questionnaires Issued	281	100%
Questionnaires not returned	20	7.1%
Net Delivery	261	92.9%

Table 3 shows that a total of 281 survey questionnaires were delivered. Of these, 20 (7.1%) were not returned. This left a net delivery of 261 (92.9%). The composition of the net response is indicated in Table 4.

**Table 4.** Composition of net response

Item	No. of respondents	Percentage
Questionnaires Issued	281	100%
Responses Received	261	97.9%
Incomplete(discarded) Responses	6	2.1%
Net Responses	255	90.7%

Table 4 shows that out of the 281 questionnaires delivered, 261 (97.9%) questionnaires were returned, out of which 6 (2.1%) were incomplete and, therefore, discarded. This is because most of the respondents had failed to fill more than 75% of the questionnaires. The subsequent analysis is based on the net responses of 255 (90.7%) whose respondent characteristics are explained in the following section.

### Characteristics of the sample

The respondents whose characteristics are explained below were drawn from three universities in Uganda. These were Makerere University Business School (MUBS), Uganda Martyrs University (UMU) and Kampala International University (KIU). All the three universities teach entrepreneurship courses. The characteristics of the sample under study covered gender, age, level of study and nature of entrepreneurship course. Frequency distributions were obtained for all the personal data. Table 5 shows distribution of Gender of the respondents.

**Table 5.** Distribution of gender of respondents

Sex	Frequency	Percent
Male	139	54.5
Female	116	45.5
Total	255	100.0

As can be observed from Table 5, gender was considered important in this study because it may have an effect on self - efficacy and intentions. Researchers have shown differences in self - efficacy of female entrepreneurs and male entrepreneurs. Table 4 shows that 54.5% of the respondents were male and 45.5% of them were female. The result indicates that there was small difference (9%) in the number of male and female students studying entrepreneurship. Table 6 shows the distribution of age of the respondents.

**Table 6.** Distribution of age of respondents

Age range	Frequency	Percent
under 20 years	1	.4
20 – 24 years	185	72.5
25 – 29 years	56	22.0
30 – 34 years	9	3.5
40 – 49 years	3	1.2
50 years and above	1	.4
Total	255	100.0

Analysis of the age distribution from Table 6, shows that the majority (72.5%) of the university students interviewed were aged between 20 to 24 years. Out of the 255, 22.0% of them were aged between (25-29) percent. These age brackets are typical of university students in Uganda given the fact that the majority join the university at the age of 19 to 20 years. The extreme age brackets are not uncommon given the fact that mature entrance and Diploma entry schemes are available avenues for university admissions in Uganda. This Table also indicates that there was one student below the age of 20. The distribution of age of the respondents confirms that they are of the right age to be at the university and, therefore, they are no longer minors. This implies that the respondents had a high level of comprehension for the items in the questionnaires. However, this research focused on the entrepreneurial self - efficacy and intentions of these categories of students. The question is whether such young people develop confidence to be entrepreneurial since at such a young age, they may be impatient to start and grow a business.

The nature of study of entrepreneurship courses was also considered important and this is presented in Table 7.

**Table 7.** Distribution of nature of study of entrepreneurship

Nature	Frequency	Percent
Course unit	223	87.5

Topic	12	4.7
Programme	19	7.4
Audited course	1	.4
Total	255	100.0

Table 7 reveals that in most universities, entrepreneurship education is taken as a course unit since 87.5% of the interviewed students reported so. Those who offer it as a topic were 4.7%. A total of 19 (7.4%) take it as a programme and 0.4% of them take it as an audited course. Although it is correct to report that the majority 223 (87.5%) take entrepreneurship as a course unit, it is not correct to say that only 19 (7.4%) take it as a programme. This argument is supported by the fact that Makerere University Business School (MUBS) registered a total of 153 third year students (2008/2009) for Bachelor of Entrepreneurship and Small Business Management. This is a reflection that most students did not understand the difference between a programme and a course unit. Despite this misconception, the importance of the nature of study is that those who take entrepreneurship education as course unit usually have less content and time compared to those who offer it as a programme. This means that those who took it as course unit were likely to have less confidence while those who took it as a programme had more time to develop their self - efficacy, hence likely to be more confident. This sentiment was common among those who were interviewed. Most of those interviewed did entrepreneurship as a course unit and all of them expressed concern that the time was too short. It was done in one semester (2 hours a week), limited in scope and most of the lectures were rushed through giving them very little time to internalize the course. Given such a scenario, it is very unlikely that entrepreneurship education contributed to the development of self - efficacy and entrepreneurial intentions of such students.

### THE STUDY VARIABLES

The ultimate dependent variable for this study was entrepreneurial intention. However, for somebody to have entrepreneurial intention there must be entrepreneurial self - efficacy. Therefore, this section is examining the mediating effect that entrepreneurial self - efficacy has for somebody to have entrepreneurial intention. In order to test for the presence of mediation and the subsequent hypothesis, an assessment was made by comparing the results of correlations. This was done so as to eliminate the possibility of doubt arising from the dangers of correlation research where significant relationship between two variables is actually due to a variable that was not considered. There was need to ascertain if a full mediation occurred.

According to Baron and Kenny (1986) a full mediation occurs if the effect of mediating variable (self-efficacy) remains significant after controlling for independent variable (entrepreneurship constructs). On the other hand, a partial mediation is deemed to have occurred if the relationship between the independent variable and the dependent variable is still significant after controlling for the effects of the intervening variable (that is, both entrepreneurship education construct and self-efficacy significantly predict entrepreneurial intentions).

Table 8 summarizes the results of the correlations. The correlation coefficient between self- efficacy and intention is ( $r = 0.418, p < 0.01$ ); while the correlation coefficient between self - efficacy and entrepreneurship education is ( $r = 0.672, p < 0.01$ ); and the correlation coefficient between entrepreneurship education and intention is ( $r = 0.464, p < 0.01$ ).

**Table 8.** Correlations between self - efficacy, entrepreneurship education and entrepreneurship intentions

Self - Efficacy	1.000		
Entrepreneurship Education	.672**	1.000	
Entrep.Intentions	.418**	.464**	1.000

\*\*  $p < .01$

The result in Table 8 shows a statistically significant relationship between entrepreneurship education and self - efficacy. This finding is consistent with the findings of Kolvereid and Moen (1997); Gorman (1997); Noel (2001); Tkachev and Kolvereid (1999); Varela and Jimenez (2001) which reported a statistically significant relationship between entrepreneurial education and the propensity to become an entrepreneur. The findings have further been supported by the result of interview with the students who agreed that they had gained more confidence from doing the course in entrepreneurship than before. One of the students narrated how confident he had become after taking the course ...

*I am very confident of myself because I know where to start from; I know which project to go for...'* Another interviewee answered *'Yes, I have developed the confidence...I have been with the people doing business. Perhaps that is why I have the confidence.*

The student's response cited above is consistent with the statement by Linan (2006) that knowing an entrepreneur, and being familiar with the business environment, makes students more confident about their own capacity of becoming entrepreneurs. All these findings confirm that entrepreneurship education can contribute to developing entrepreneurial

self efficacy of the students, especially where the learner is exposed to the real situation. Further investigation was carried out to establish whether they had the intention to engage in creating jobs for themselves now that they had completed their study. One of the interview questions in connection with their intention was: Assuming you were offered two alternatives, 1. an offer for an executive employment in a reputable firm and 2. an offer of an attractive sum of money for a start up capital for a business, which one would you choose? Although one would expect them to go for the second option, the findings indicate that most of them opted for executive employment. Some of the reasons for going for employment were expressed as follows:

*At my level I would start with reputable jobs and think of a business later...think of getting enough capital first, that is, have something first before I receive contribution from others.' Another student answered. I would prefer to start from a firm since I will be innovative, creative, before starting. I may not feel the pain if I am given money...Business risk such as Government policy, tax, procedures and so on.*

These findings explain why there is a moderate correlation between entrepreneurship education and entrepreneurial intentions though statistically significant ( $r = 0.464$ ,  $p < 0.01$ ). This implies that even if the students had received entrepreneurship education, their intentions to start a business still remain doubtful. However, the results of the correlation indicated a statistically positive significant relationship between self - efficacy and intention implying that self - efficacy has an effect on intentions. Self - efficacy, on the other hand, is influenced by education. It was therefore concluded from the correlation results that self-efficacy mediates between entrepreneurship education and intentions of the students. This means, if self-efficacy is increased, intention to become entrepreneurs also increases though not necessarily in the same proportion. Thus, it is proposed that self - efficacy is an important variable in measuring the level of entrepreneurial intention, as well as the likelihood of entrepreneurial action.

In order to test the mediation effect of self-efficacy, Baron and Kenny (1986) four-step regression method, as explained under methodology section, was used. In step 1, a simple regression analysis was carried out with entrepreneurship education predicting entrepreneurial intention. The results are shown in Tables 9 and 10. The model also produces Durban-Watson test statistics value of 1.863. Since this value is greater than 1 and less than 3, it shows that the model is well specified.

**Table 9.** Regression model with entrepreneurial intentions as dependent variable

Model	R	R square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics				Durbin-Watson
						F Change	df1	df2	Sig. F Change	
1	.418 <sup>a</sup>	.175	.163	.20261	.175	14.412	2	136	.000	1.885

a. Predictors: (Constant), Entrepreneurship Education, Self Efficacy

a. Dependent Variable: Entrepreneurial Intentions

The ANOVA, Table 10, indicates that the model fits and there is linearity between entrepreneurship and entrepreneurial intention (Sig.F = 0.002) shown in the tables.

**Table 10.** ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.459	1	.459	9.974	.002 <sup>a</sup>
Residual	6.307	137	.046		
Total	6.766	138			

a. Predictors: (Constant), Entrepreneurship Education

b. Dependent Variable: Entrepreneurial Intentions

The coefficients table indicates a significant positive effect of entrepreneurship education on entrepreneurial intention. This means that entrepreneurship education alone explains or contributes 26.1% of the variance in entrepreneurial intention as indicated by the Adjusted R square with Beta coefficient ( $\beta = 0.464$ ) indicating a moderate contribution to the development of entrepreneurial intention as shown in Table 11.

**Table 11.** Relationship between entrepreneurship education and entrepreneurial intention

Model	Unstandardized Coefficients		Standardized Coefficients		Correlations				Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.491	.018		26.878	.000					
Self Efficacy	.139	.033	.409	4.200	.000	.418	.339	.327	.638	1.566
Entrepreneurship Education	.005	.034	.014	.147	.883	.261	.013	.011	.638	1.566

a. Dependent Variable: Entrepreneurial Intentions

In Step 2, a simple regression analysis was run with entrepreneurship education predicting self - efficacy. The results show a positive linear relationship between entrepreneurship education and entrepreneurial intention and also positive significant effect of entrepreneurship education on entrepreneurial intention. The entrepreneurship education significantly contributes 44.9% to the development of entrepreneurial self - efficacy. This contribution is high as indicated by Beta coefficient ( $\beta = 0.672$  or 67.2%) as in Table 12.

**Table 12.** Relationship between entrepreneurship education and self - efficacy

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Tolerance	VIF	
(Constant)	3.013E-17	.033		.000	1.000					
Entrepreneurship Education	.673	.047	.672	14.423	.000	.672	.672	.672	1.000	1.000

a. *Dependent Variable: Self Efficacy*

The result in Table 12 is partly supported by the fact that 90% of the students interviewed agreed that they had gained confidence in themselves more than before the course. For example, ability to see more opportunities than before. One female respondent, when asked whether she had the confidence to start and grow a business responded , “Yes, I did gain confidence. I really believe I can do something, for example, I can start a very nice Hair Saloon.” The student’s response is also in line with the findings of other researches (Kolvereid and Moen, 1997; Gorman, 1997; Varela and Jimenez, 2001) which showed that there was a significant relationship between entrepreneurship education and the propensity to become an entrepreneur.

The coefficients table produces the VIF and the Tolerance values of less than 10 and greater than 0.2 respectively indicating no multi collinearity within the data.

The collinearity diagnostics results indicate the Eigen value of 1.000 and the condition index of 1.000 as well, all supporting the fact that the model fits and there is no collinearity between entrepreneurship education and self - efficacy. The result is indicated in Table 13.

**Table 13.** Collinearity Diagnostics: entrepreneurship education and self - efficacy

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Entrepreneurship Education
1	1	1.000	1.000	1.00	.00
	2	1.000	1.000	.00	1.00

a. *Dependent Variable: Self -Efficacy*

Another simple regression analysis was performed in step 3 with entrepreneurial self - efficacy predicting entrepreneurial intention. The results from the model summary table and the coefficient table indicate that there is a positive significant relationship between self - efficacy and intention ( $r=0.418, p<0.01$ ). This is indicated in Table 14.

**Table 14.** Relationship between self - efficacy and entrepreneurial intentions

	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta				Zero-order	Partial	Part	Tolerance	VIF
<sup>1</sup> (Constant)	.492	.018			27.352	.000					
Self - Efficacy	.142	.026	.418		5.386	.000	.418	.418	.418	1.000	1.000

a. Dependent Variable: Entrepreneurship Intentions

The purpose of steps 1 – 3 was to establish that zero-order relationships among the variables exist. If one or more of these relationships are non-significant, researchers usually conclude that mediation is not possible or likely (although this is not always true, MacKinnon, Fairchild, & Fritz, 2007). A significant relationship from steps 1 – 3, led to step 4. In step 4 model, there was need to ascertain if a full or partial mediation occurred. According to Baron and Kenny (1986) a full mediation occurs if the effect of mediating variable (self-efficacy in this context) remains significant after controlling for independent variable (entrepreneurship education). On the other hand, a partial mediation is deemed to have occurred if the relationship between the independent variable and the dependent variable is still significant after controlling for the effects of the intervening variable (that is, both entrepreneurship education construct and self-efficacy significantly predict entrepreneurial intentions). The results of step 4 were presented as in Table 15.

**Table 15.** Regression Model with entrepreneurial intention as dependent variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson
						F Change	df1	df2		
1	.418 <sup>a</sup>	.175	.169	.20189	.175	29.010	1	137	.000	1.889

a. Predictors: (Constant), Self- Efficacy

b. Dependent Variable: Entrepreneurial Intentions

Since the (Sig.-F = 000), it means the regression model was good and, therefore, proceeded to interpret the results of the regression. The regression model, Table 17, shows that 16.3% of the variance in intention is explained by self - efficacy.

Further analysis was done to establish the relationship between self-efficacy, entrepreneurship education and entrepreneurial intention. The result is as shown in Table 16.

**Table 16.** Relationship between self -efficacy, entrepreneurship education and entrepreneurial intentions

Model	Unstan- dardized Coefficients		Standard- ized Coef- ficients		Correlations			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Zero- order	Par- tial	Part	Tolerance VIF
(Constant)	.491	.018		26.878	.000				
Self - Efficacy	.139	.033	.409	4.200	.000	.418	.339	.327	.638 1.566
Entrepreneur- ship Education	.005	.034	.014	.147	.883	.261	.013	.011	.638 1.566

a. Dependent Variable: Entrepreneurial Intentions

The coefficient Table 18 shows a statistically significant positive relationship between entrepreneurship self - efficacy and intention (Sig = .000) with a moderate contribution of 40.9% while there is statistically insignificant relationship between entrepreneurship education and intention (Sig. = 0.883), contributing only 1.4% to the development of entrepreneurial intention. This result shows a full mediation of self-efficacy.

To cross check if a full mediation occurred, a step wise regression analysis was run. This was done to remove the variables which were not significant. The results were as shown in Tables 17, 18 and 19.

**Table 17.** Regression Model with entrepreneurial intention as dependent variable

Model	R	R Square	Std. Error		Change Statistics			Sig. F Change	Durbin- Watson
			Adjusted R Square	of the Estimate	R Square Change	F Change	df1		
1	.418 <sup>a</sup>	.175	.169	.20189	.175	29.010	1	137	.000 1.889

a. Predictors: (Constant), Self - Efficacy

b. Dependent Variable: Entrepreneurial Intentions

The model summary indicates that self - efficacy with Adj R<sup>2</sup> = 0.169 explain 16.9% of the variance in entrepreneurial intention. When enter method was used in running the regression, the results indicated the Adj R<sup>2</sup> = 0.182 (18.2%) meaning that all the variables taken together explain 18.2% of the variance in entrepreneurial intentions. Out of 18.2% of the variance in the entrepreneurial intention 16.9% was explained by variation in self efficacy alone leaving only 1.3% of the variance in intention to be explained

by variations in content, objectives and method. It was concluded that self - efficacy had mediating effect of 16.9% thus supporting the hypothesis..

Besides the Baron and Kenny (1986) four-step approach, a final test for mediation was carried out using hierarchical multiple regressions. The result brought out two levels of hierarchical models. The Tables 20 and 21 show the results. In model one, the result indicates self - efficacy as predictor and entrepreneurship intention as dependent variable. Model two, the predictors were indicated as self - efficacy, content, objectives and methods with intention as the dependent variable. The result indicates that there is a statistically significant positive mediation of self - efficacy of 17.5%. On the other hand, model two indicates statistically insignificant relationship between the entrepreneurship education constructs and intentions, hence confirming the full mediation of self - efficacy. This result is consistent with the result obtained using Baron and Kenny (1986) four-step approach. The result is shown in Table 18.

**Table 18.** Regression Model with self - efficacy, methods, objectives and content as independent variables and entrepreneurial intention as dependent variable

Model	R	Change Statistics								
		R Squared	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.418 <sup>a</sup>	.175	.169	.20189	.175	29.010	1	137	.000	
2	.454 <sup>b</sup>	.206	.182	.20027	.031	1.739	3	134	.162	1.951

a. Predictors: (Constant), Self - Efficacy

b. Predictors: (Constant), Self - Efficacy, Methods, Objectives, Content

c. Dependent Variable: Entrep.Intentions

The result of the regression further revealed the relationship between self-efficacy, content, objectives and methods with entrepreneurial intentions. The coefficient matrix results are presented as in Table 19.

Since the results indicate that self-efficacy has a mediating effect between the education construct (content, objective and method) and entrepreneurial intention, the hypothesis that the relationship between entrepreneurship education and entrepreneurial intention is mediated by entrepreneurial self-efficacy is confirmed.

**Table 19.** Relationship between self- efficacy, content, objectives, and methods with entrepreneurial intentions

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta				Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.492	.018			27.352	.000					
Self - Efficacy	.142	.026	.418		5.386	.000	.418	.418	.418	1.000	1.000
(Constant)	.488	.018			26.873	.000					
Self - Efficacy	.166	.032	.491		5.155	.000	.418	.407	.397	.654	1.529
Content	-.039	.021	-.159		-1.822	.071	.049	-.155	-.140	.783	1.278
Objectives	-.003	.019	-.016		-.185	.854	.174	-.016	-.014	.794	1.259
Methods	.024	.018	.101		1.303	.195	.110	.112	.100	.990	1.010

a. Dependent Variable: Entrepreneurial Intentions

## DISCUSSION

This study makes contribution to the literature by investigating and testing the statistical relationship between entrepreneurship education and entrepreneurial intention among university students, and the mediating effect of self-efficacy on the relationship between entrepreneurship education and entrepreneurial intentions among university students in Uganda. The author is not aware of efforts that have been made to empirically investigate this phenomena in the Ugandan context, even though there are numerous studies on the relationships between entrepreneurship education and entrepreneurial intentions, and between self-efficacy and entrepreneurship. The results indicate that the mediating effect of self-efficacy on the relationship between entrepreneurship education and entrepreneurial intention satisfies the conditions as suggested by Baron and Kenny (1986). This is true because the self-efficacy that resides in an individual can put that individual in a better position to a better position to be entrepreneurial.

The research results also indicate that students' exposure to entrepreneurship education has a positive effect on entrepreneurial self-efficacy and intentions. The correlation coefficient between self efficacy and intention is ( $r = 0.418, p < 0.01$ ); self- efficacy and entrepreneurship education is ( $r = 0.672, p < 0.01$ ); entrepreneurship education and intention is ( $r = 0.464, p < 0.01$ ). This is consistent with the result of path analysis which shows strong direct effect (.52) of self - efficacy on entrepreneurial intentions.

In relation to each of the hypotheses, support was found for the mediating effect of self-efficacy on entrepreneurial intentions: in examining

the parameter estimates in the regression model, the self-efficacy dimensions were statistically significant to explain variance in entrepreneurial intentions. The result shows that in the absence of self-efficacy, entrepreneurship education and entrepreneurial intentions have weak relationship. However, in the presence of self-efficacy, entrepreneurship education and entrepreneurship intention among university students highly correlate as shown by the significant relationships existing among the variables measuring the two attributes.

However, on the other hand, self-efficacy does seem to explain some variation in entrepreneurial intentions as shown in the stepwise regression, even though it is relatively low. Partial mediation effect of self-efficacy was found on the relationship between entrepreneurship education and entrepreneurial intention. The results illustrate the importance of sources of self-efficacy as a conduit in enhancing the relationship between entrepreneurship education and entrepreneurial intention of students. This links well with the theory of planned behavior (TPB), especially the perceived behavioral control, which helps to understand how we can change the behavior of people (Ajzen, 1991). The perceived behavioral control came from Bandura's concept of self-efficacy. Individuals' appraisal of efficacy in a given domain is based in part on a judgment of their general self-regulatory capabilities. Thus, a topic such as entrepreneurship that entails study of macro performance that transcends specific situations, using the generic self-efficacy in combination with the entrepreneurial self-efficacy, appears justified.

## **CONCLUSION**

---

This paper confirms that entrepreneurship education and self-efficacy play a fundamental role in enhancing entrepreneurial intentions. Entrepreneurship education is necessary condition but not sufficient to develop entrepreneurial intention unless combined with self - efficacy. Self-efficacy has a strong mediating effect between entrepreneurship education and entrepreneurial intentions among university students.

The entrepreneurial intentions of students are influenced directly by the students' self-efficacy and indirectly by entrepreneurship education. It can be concluded that entrepreneurship education can contribute significantly to development of students' entrepreneurial intention when mediated by self-efficacy. In other words, it can be stated thus: to be motivated to act, potential entrepreneurs must perceive themselves as capable and psychologically equipped to function.

---

## Limitations of the study

One limitation of this study is the use of only self-report measures. Survey data were self-reported; therefore study is prone to cognitive and motivational bias, for example, self-serving bias and social desirability. Since entrepreneurship is a charismatically charged term and carries a lot of social weight, to reduce social desirability in reporting high self-efficacy the survey instruction emphasized honesty for self assessment.

Although some of the constructs are conceptualized as self-reports, for example, self-efficacy, a second source of data would be particularly useful for other variables, such as the extent of learning from formal education. Class grades or performance on an objective test could be used in future research to gauge students' actual learning.

A second limitation is the Scope of the Study. The results of the study is limited to only three universities in Uganda by sample and method. Given the designs adopted in this study, nature of sampling done in a few universities and in one country and in more or less one region, generalization of our findings is limited to Uganda.

A third limitation is the student sample. The primary respondents were students facing an immediate career choice, for whom starting a business may be a realistic option. Also, even very early career intent is a good predictor. Nonetheless, they were still students with much variability among them; therefore it is difficult to draw any generalizations about them. This makes the identification of appropriate samples particularly important for studies that explore whether certain behaviors or beliefs can predict entrepreneurial behavior.

In sampling the university students, a proportionate stratified sampling was done leading to a highly skewed sample towards Makerere University Business School. A disproportionate stratified sampling that ensures reasonable representation of the other two universities would have been better.

Finally, study design itself is another limitation. A cross-sectional study design only offers a snap shot to explore whether static relationships exist and it diminishes any predictions in the long run. This is against background that entrepreneurship education issues and problems may be better investigated over a period of time with some degree of accuracy. However, this limitation was mitigated by using a triangulation approach to data collection to reduce the ambiguities in the data collected.

## References

- Amin, M. E. (2005). *Social Science Research; Conception, Methodology and Analysis*. Kampala: Makerere University Printery.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing, 18*, 105-123.
- Bandura, A. (1997). *Self-Efficacy. The Exercise of Control*. New York: W.H. Freeman & Company.
- Bandura, A. (1986). *The Social Foundations of Thought and Action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2). 122-147.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Boyd, N.G., Vozikis, G.S. (1994). The influence of self-efficacy on the development of entrepreneurial intention and actions. *Entrepreneurship Theory and Practice*. Baylor University.
- Chen, C.C., Greene, P.G., Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs for managers?. *Journal of Business Venturing, 13*(4), 295-316.
- Cox, L.W; Mueller, S.L; Moss, S.E. (2003). The Impact of Entrepreneurship Education on Entrepreneurial Self-Efficacy. *International Journal of Entrepreneurship Education, 1*(2), 229-247.
- Creswell, J.W. (2003). *Research Design - Quantitative, Qualitative and Mixed Methods Approach*. Sage Publications, Inc. California, London and New York.
- Gist, M.E., & Mitchell, T.R. (1992). Self-efficacy: a theoretical analysis of its determinants and malleability. *Academy of Management Review, 2*(17), 183-211.
- Gorman, G. & Hanlon, D. (1997). Some research perspectives on entrepreneurship education, and enterprise education for small business management: a ten year literature review. *International Small Business Journal, 15*(3), 56-78.
- Kolvereid, L., Moen, O. (1997). Entrepreneurship among business graduates: does a major in entrepreneurship make a difference?. *Journal of European Industrial Training, 21*(4), 154-160.
- Krueger, N.F., & Brazeal, D.V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice, 18*(3), 91-104.
- Krueger, N.F. (1999). *The cognitive infrastructure of opportunity emergence*. Working Paper. National Council of Independent Scholars, Bozeman, MT.
- Lucas, A.W; & Cooper, S.Y; (2004). *Enhancing self-efficacy to enable entrepreneurship: the case of CMI's connections*. Cambridge, MA: MIT Sloan Working Paper 4489-04.

- MacKinnon, D.P., Fairchild, A.J. & Fritz, M.S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593-614.
- Noel, T.W. (2002). Effects of entrepreneurship education on intent to open a business: an exploratory study. *The Journal of Entrepreneurship Education*, 5, 3-13.
- Nunnally, J. (1978). *Psychometric Theory*. New York: McGraw-Hill.
- Oyugi, J.L. (2011). *Contribution of Entrepreneurship Education to developing entrepreneurial self-efficacy and entrepreneurial intentions among university students in Uganda* (unpublished PhD thesis). Nairobi: Kenyatta University.
- Vancouver, J.B. (2002). Two studies examining the negative effect of self-efficacy on performance. *Journal of Applied Psychology*, 87(3), 506-516.
- Varela, R., and Jimenez, J.E. (2001). *The effect of entrepreneurship education in the universities of California*. Frontiers of Entrepreneurship Research: Babson Conference Proceedings.
- Wuensch, K.L. (2008). *Conducting a Path Analysis with SPSS/AMOS*. Greenville East Carolina University.
- Zhao, H., Seibert, C. (2005). The moderating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265- 1272.

### **Abstrakt (in Polish)**

Ten artykuł został napisany na podstawie danych pochodzących z obszernego badania przeprowadzonego przez J.L. Oyugi (2011). Badano wkład kształcenia w zakresie przedsiębiorczości dla rozwoju własnej skuteczności w działaniach gospodarczych i intencji podjęcia takich działań wśród studentów wyższych uczelni w Ugandzie. Praca ta rozpoznaje rozwój i naukę kursów przedsiębiorczości w większości uniwersytetów w Ugandzie, mających na celu przygotowania absolwentów, którzy będą tworzyć miejsca pracy. W czasach, gdy podejmowane są wysiłki w celu rozwiązania bezrobocia wśród absolwentów poprzez główny nurt kształcenia w zakresie przedsiębiorczości w edukacji ponadpodstawowej i na poziomie szkół wyższych, niniejsza praca przedstawia jasne i aktualne wskazówki, jak tworzyć program nauczania przedsiębiorczości. Zaproponowano tu analizę ilościową, w której edukacja w zakresie przedsiębiorczości i własnej skuteczności w roli przedsiębiorcy są kluczowe w rozwijaniu intencji przedsiębiorczych studentów. Aby to zbadać, sformułowano dwie hipotezy. Dane zebrano za pomocą kwestionariusza ankiety elektronicznej, wypełnionej przez studentów, losowo wybranych spośród studentów III roku, którzy odbyli zajęcia z kursu przedsiębiorczości. Wyniki badań wykazały, że istnieją znaczące relacje pomiędzy edukacją w zakresie przedsiębiorczości i zamierzeniem podjęcia działalności gospodarczej, podczas gdy poczucie własnej skuteczności okazało się częściowo pośredniczyć w edukacji z zakresu przedsiębiorczości i zamiarem podjęcia działań przedsiębiorczych.

**Słowa kluczowe:** kształcenie na rzecz przedsiębiorczości, poczucie własnej skuteczności jako przedsiębiorca, intencje przedsiębiorcze, mediacja, studenci.

### **Biographical note**

**Dr. Jacob L. Oyugi** is a Senior Lecturer in the Department of Management Science, School of Management and Entrepreneurship, Kyambogo University and Associate Consultant with Uganda Management Institute, Uganda. He earned his PhD from Kenyatta University, Nairobi. His research interest is entrepreneurship focusing on entrepreneurship education, training and development in universities.

---

# Access to Business Development Support Services and Performance of Youth-Owned Enterprises in Tanzania

Neema Mori<sup>1</sup>

---

## **Abstract**

*We investigated a sample of 3,098 randomly chosen youth-owned enterprises (YOE) in Tanzania and studied their access to business development support (BDS) services. YOE are defined as enterprises owned and run by young entrepreneurs, aged between sixteen and thirty-five, according to the Tanzanian definition of youth. We analyzed which BDS services affect the performance of YOE in terms of (i) number of employees, (ii) whether the enterprise keeps financial records and (iii) the entrepreneurs' perception of the performance of their enterprises. With the support of the resource-based view, we found that access to expert advice is positively associated with a YOE's number of employees and their ability to keep financial records. We also found that access to business management training and entrepreneurship training positively influences financial record keeping and enterprises' perceived performance. Overall, we conclude that the resources that young entrepreneurs obtain through their access to BDS services are crucial for their enterprises.*

**Keywords:** youth, business development services, YOE, Tanzania.

---

## **INTRODUCTION**

Young people's participation in owning and running small and medium-sized enterprises (SMEs) forms part of youth entrepreneurship, which is a means of improving youths' livelihoods (Niemelä and Häkkinen, 2014). Within the framework of efforts and strategies aimed at creating jobs for young people, entrepreneurship and youth-owned enterprises (YOE) are becoming acceptable as an important means and a valuable strategy for creating jobs and ensuring the economic independence of young people (De Gobbi, 2014; Sukarieh and Tannock, 2008). It is an innovative approach for integrating youth into today's changing labor markets. Although YOE play a crucial role in driving economic development and creating jobs, there is little research

---

<sup>1</sup> Neema Mori, Ph.D., Department of Finance, University of Dar es Salaam Business School, Dar es Salaam, Tanzania. Research Fellow, Norwegian Centre For Microfinance Research (NOCMIR), University of Agder, Kristiansand, Norway. UDBS Building Wing A, P.O. Box 35046, Dar es Salaam, Tanzania. Tel.: +255767065698. E-mail: neema.mori@gmail.com.

---

examining SMEs and entrepreneurship from the perspective of youth. Young people are mostly treated as part of the general adult population, while their specific needs and particular entrepreneurial potential, the high unemployment rate among them and their critical contribution to economic and social progress are underestimated.

Access to education and business development support (BDS) services, such as entrepreneurship training, is important if younger adults are to be successful in running their enterprises (Shelley, 2014). Chigunta (2002) suggests that YOE's need to access BDS and must know how to, among other things, develop business plans, manage their businesses, manage their finances (budgeting), manage their time, market their goods and sell them. All these aspects are essential for enhancing the performance of their enterprises. Despite the fact that access to BDS is important, there is little knowledge of how these services enhance the performance of businesses. There is some literature that shows how important these services are and how SMEs access finance but few studies have examined their effects on performance. This study seeks to fill this gap by examining the extent to which access to different forms of BDS affects enterprise performance. We ask the following question: What are the effects of BDS services on the performance of YOE's?

The focus on YOE's is important because the young form the basis of a society's future. Thus, many nations are recognizing the importance of youth to their development and are formulating policies and programs to guide them (Koe, 2013). The global youth population is increasing, now representing 20% of the world's total population. It is further estimated that the youth population will peak at 1.5 billion in 2035, increasing most rapidly in Sub-Saharan Africa, by 26%.

Youth is a crucial time in life when young people start realizing their aspirations, assuming their economic independence and finding their place in society. The global jobs crisis has exacerbated the vulnerability of young people in terms of (i) higher unemployment, (ii) lower-quality jobs, (iii) greater labor market inequalities, (iv) a longer and less secure school-to-work transition, and (v) increased detachment from the labor market (De Gobbi, 2014). The principal challenge for many African economies, including Tanzania, is to find productive employment for the 7 to 10 million new entrants to the labor force annually.

Tanzania is facing a youth unemployment crisis rivaled by few other nations in the world. Estimates show that between 650,000 and 750,000 Tanzanian youths enter the labor market every year (Ng'habi, 2013). The latter study further shows that the formal private sector employs most of the youths, with approximately 14% employed in this sector. Manacorda and

---

Kondylis, (2006) illustrate that in urban areas the aggregate state of the local labor market is a major determinant of a young individual's labor market outcome.

Owning, starting and operating their own enterprises is an important channel for youths, allowing them to create employment for themselves and others (Garba and Djafar, 2013). A report by the Ministry of Trade in Tanzania (URT, 2012), shows that 47% of SME owners are younger than 35 years old. This implies that the number of YOE's is increasing. It is therefore apparent that youths are an important resource and have an important role to play in the economic development of the country. This means that examining the performance of their enterprises is crucial as their survival and success have major implications for both policy and theory.

We use the resource-based view (RBV) as our theoretical perspective because the resources that the young entrepreneur obtains through accessing BDS services are crucial in enabling his/her enterprise to perform well. The RBV further argues that differences in performance between enterprises may be best explained through differences in their human and financial assets and resources and their application, rather than through differences in industry structures. We therefore use this theory to study whether YOE's with access to BDS resources perform better than those without such access.

The BDS services examined are expert advice, business management training, entrepreneurship training, support with developing a business plan and technical skills. The performance/growth aspects examined are the number of employees, whether financial records are kept and perceived performance.

We tested our hypothesis using data from the MSME (micro, small and medium-sized enterprises) baseline survey<sup>1</sup>. These data were collected in 2010. The dataset covers the whole of Tanzania. We extracted data on youth entrepreneurs between 16 and 35 years of age as of 2010. The resulting youth dataset had 3098 observations.

The findings support a relationship between BDS access and YOE's' performance. We find access to expert advice to be positively associated with a YOE's number of employees and ability to keep financial records. We also find business management and entrepreneurship training to positively influence financial record keeping and enterprises' perceived performance. These results show that the resources that young entrepreneurs obtain by accessing BDS services are key to their enterprises' performance.

The rest of the paper is organized as follows. The next section presents the literature on young entrepreneurs and their enterprises. This is followed

---

1 The MSME baseline survey data were obtained from the Financial Sector Deepening Trust. We thank them for making this dataset available to us.

by a section covering the theory. Afterwards, we present the methodology used in the study, followed by the results and discussion. The conclusion and implications are presented in the last section.

### **Young entrepreneurs and their enterprises**

Young entrepreneurs and their enterprises are among the more recently recognized sources of income, new jobs and economic dynamism in developed countries (De Gobbi, 2014; Olomi and Nchimbi, 2009). The literature further suggests that YOE are a bottom-up method of generating income and self-reliance and an innovative path to earning a living and caring for oneself (Green, 2013). Studies further show that young entrepreneurs and the performance of their enterprises may vary according to the entrepreneur's age. Chigunta (2002) and Schoof (2006) consider three transitional categories of young entrepreneurs based on their age. First are the pre-entrepreneurs who are between 15 and 19 years old. This, according to them, is the formative stage during which younger youths are often in transition from the security of the home or education to the workplace. Second are the budding entrepreneurs, who are between 20 and 25 years old. This is the growth stage by which point, youths and their enterprises have gained some experience, skills and capital to enable them to continue in business. Young entrepreneurs at this stage have three enterprise pathways: remaining stuck in the marginal activities in which they are currently engaged, going out of business, or running their enterprises successfully and looking for ways to grow (Chigunta, 2002). The final stage is the emergent entrepreneurs, who are between 26 and 29 years old. This is the prime stage, by which point young entrepreneurs have valuable business experience and are more mature than those in the lower age groups.

However, Chigunta (2002) further points out that this kind of categorization only serves as a broad suggestion, as transitions differ from country to country and from business sector to business sector. Lewis and Massey (2003) further suggest that the needs and challenges facing young entrepreneurs vary according to age, level of readiness to engage in business, and intention to be enterprising. This implies that BDS for young entrepreneurs and their enterprises will have different effects, depending on their stage of development and these other differences.

In Tanzania, youths are defined as persons aged 15 to 35 (Olomi and Nchimbi, 2009; URT, 2007). Our paper uses this definition and further categorizes youths into two groups: younger youths aged 15 to 24 and older youths aged 25 to 35 (Olomi and Nchimbi, 2009). In this way we recognize that youths are a heterogeneous group with different challenges and needs.

For instance, younger youths are more likely to be single, to have not worked before and to still live with their parents. Those who have YOEs are most likely to engage in a narrow range of activities, mostly informal trading and activities that are relatively easy to engage in. By contrast, older youths are likely to be more independent, to have families and to have more stable businesses (Olomi and Nchimbi, 2009). Based on this categorization, this paper examines how the two groups' enterprises perform.

The Global Entrepreneurship Monitor, a report that measures, analyzes and reports on entrepreneurial activity in 43 countries, shows that people aged between 25 and 34 are more likely to start owning and running enterprises than other age groups (Amorós and Bosma, 2013). The reasons suggested for this are the following: youths in this age group have developed enough competence to manage a new business through work experience; they may have accumulated other resources, such as relevant networks, personal savings, or access to financial resources; they may have recognized opportunities relating to their experience or may have decided to work independently after having been employed; they are less likely to be established in a career that may offer a higher salary or position; they may have fewer personal financial obligations, such as major loans and families to support. All these factors, together with high youth unemployment, may motivate them to own and run their own enterprises. The aforementioned report further shows these youths to have less to lose than their older counterparts.

The literature cites various reasons why young entrepreneurs are important to both literature and practice. Green (2013) and Schoof (2006) mention the following: they provide a source of employment for themselves and other youths; they create a sense of meaning and belonging by positioning themselves within the economic mainstream; starting a business addresses some of the socio-psychological problems and the delinquency that can result from joblessness; they are able to develop new skills and experiences that can then be applied to other challenges in life; they promote innovation and resilience in themselves, due to the fact that they are able to respond quickly to new economic opportunities and trends.

YOEs are also important in themselves. The literature argues that promoting YOEs changes youths' attitudes and values so that they see self-employment as a viable means of earning a living and prospering (Green, 2013). YOEs not only raise the degree of competition in the product market, but also create linkages between young entrepreneurs and other economic actors, through subcontracting, franchising, and so on.

Various studies have looked at the performance of YOEs. Fairlie (2005), for example, examines entrepreneurship and earnings among YOEs in USA.

The study assesses whether youths who own and run enterprises earn more than employed youths. The results show that male youths who run businesses earn more than employed male youths. In contrast, young women running businesses earn less than their employed counterparts.

Amorós and Bosma (2013) show that YOE run by youths aged 25 to 34 perform better than those owned by younger youths (aged 18 to 25) and this is more apparent in high-income countries. Different levels of participation in both secondary and tertiary education are one reason for this tendency. In low-income countries, most young people do not complete secondary education and thus tend to start businesses earlier, with a lower level of education, whereas in high-income countries education seems to be positively related to the performance of YOE (Amorós and Bosma, 2013). Walstad and Kourilsky (2008) investigate the attitudes towards education and the knowledge of entrepreneurship among black youths in the USA. The results show that black youths have a strong desire to start businesses, want more teaching of entrepreneurship in their schools, and believe that successful entrepreneurs have a responsibility to give back to their community. The authors further point out that black youths who own and run businesses face greater challenges in accessing role models and business support or knowledge than their white counterparts.

Kilonzo (2012) examines factors that enhance YOE's performance, conducting a survey of 465 YOE in the Machakos District of Kenya. The performance of the YOE is measured in terms of sales level, sales growth rate, cash flow, gross profit margin, return on investment and retained earnings. The results indicate that measures of perception, namely the need to achieve, self-efficacy, moderate risk taking, and the perception of opportunities, are important predictors of YOE's performance. In addition, the author finds a positive relationship between financial resources and YOE performance, and she recommended that more financial resources should be made available to YOE to enable them to improve their business performance.

Wanjiru (2013) also investigates the factors influencing the performance of YOE, specifically examining the influence of socio-cultural factors, education, training and skills, and access to finance. Performance is measured using sales, number of employees and net income. The study sample is 122 YOE in Kenya. The results show that socio-cultural factors, mainly religion and family size, affect the performance of YOE. The study further establishes that education, training and skills affect the performance of enterprises. The author finds the majority of the young entrepreneurs in her sample (73%) to have never received any business support services, while the remainder report a positive difference to their enterprise performance from such services. The author recommends, among other things, that YOE should be

---

able to access different kinds of BDS services, such as business management skills and entrepreneurship training, to improve their performance.

These results and recommendations are similar to those of Green (2013), who suggests that young entrepreneurs face imperfect information both before and after starting a business. The Green's report further suggests that young people may simply be unaware of the potential of entrepreneurship, their entrepreneurial aptitude or the skills they will need in order to perform well in their enterprises. A lack of awareness and access to information on BDS may also impede the growth of their enterprises.

Finally, Berry, Sweeting and Goto (2006) examine the effect of business advice on the performance of SMEs in general. They look at the relationship between business performance and the nature and degree of a wide range of business advice used by a sample of owners/managers of 140 SMEs in the UK. The results show that an SME's use of a range of external advice is positively related to its growth rate. The business and financial management advice the SMEs had received was perceived to be helpful in terms of enterprise performance. The authors further argue that the range and nature of advice provided by external accountants, academicians and other BDS service providers are important for enhancing SMEs' performance.

These arguments demonstrate that YOE's create employment for youths and encourage the development of youth entrepreneurship. There are also some studies that have looked at young entrepreneurs and the performance of YOE's. However, most of these studies have been descriptive, looking more at the characteristics of young entrepreneurs and how they perceive the performance of their own enterprises. Except for Berry et al. (2006), who examine the performance of all SMEs in the UK, none of the reviewed studies examines the effect of BDS on YOE's performance. In addition, the prior studies reveal that higher education is essential for YOE's performance and therefore we argue that, since many young entrepreneurs do not have higher education, it is necessary for them to access BDS so as to gain knowledge on how to run their enterprises (Wanjiru, 2013). This study contributes to this view.

---

## **THEORY AND HYPOTHESIS**

BDS comprises services that improve the performance of enterprises. These services include training in business management, entrepreneurship, and business plan development, consulting, coaching and mentoring, and the provision of advice, marketing assistance, information, technology development and transfer, and business linkages promotion (Stevenson and St-Onge, 2013). These services are resources that YOE's need in order

to improve their daily operations, to make strategic decisions that can help them identify and service markets, to design products, to set up facilities, to seek finance, and/or to make them more competitive with other enterprises (Stevenson and St-Onge, 2013).

YOE are more likely to access and use BDS services than others. Green, 2013 calls these services “soft support”, as they are intangible services, as opposed to “hard support” such as obtaining funds, but they are still key to YOE’s performance. These services may be obtained through formal channels (colleges and BDS providers), or informally through the internet, social networks of youths or older mentors, who may use their social capital to leverage resources for aspiring young entrepreneurs (Green, 2013). Because of this, it is possible that not all young entrepreneurs will be able to access the same level and quality of services. In this case, some young entrepreneurs may have certain skills and experience that others lack and this may make them more competitive.

The RBV provides the theoretical justification of how the access to and use of BDS can enhance the performance of YOE. The theory examines the performance of enterprises from the perspective of the internal resources that enterprises have (Barney, 1991). According to the latter author, resources are tangible and intangible assets that are tied semi-permanently to the enterprise. The literature further shows that an enterprise’s tangible and intangible resources are central to explaining its performance (Wernerfelt, 1984). Examples of resources can include brand names, in-house knowledge of technology, the employment of skilled personnel, and specific business knowledge. The access and use of various BDS services are among the intangible resources that YOE can benefit from in order to enhance their performance.

Lerner and Almor (2002) further suggest that the RBV is an appropriate theory for explaining how small enterprises are created and managed, because it best describes how the entrepreneurs themselves build their businesses from the resources and capabilities they currently possess or can acquire. Chigunta (2002) points out that there are some business support resources that youths already have and others that they can acquire. The author shows that the business skills that one should already have are the capacity to plan, communicate, market, and build and lead a team, as well as inter-personal, basic management and quantitative/analytical skills. The resources that one can access comprise specialized marketing advice/services, and training in record keeping, the law, accounting, research, technical matters, financial and information management, and so on.

Accessing these services in different ways can differentiate one entrepreneur from another and one enterprise from another. Since the

RBV posits that performance may be best explained through the resources, assets and skills available to the enterprise, we hypothesize that there is a positive relationship between young entrepreneurs who have acquired BDS and the performance of their enterprises. Moreover, the theory predicts that entrepreneurs whose resources are superior (in this case indicated by a young entrepreneur who has accessed/received business support) will be able to ensure the superior performance of their enterprises (Peteraf, 1993, p. 180).

---

## METHODOLOGY

### Data

The empirical setting for this study is Tanzania. Tanzania has a population of 47 million and 48% of them are youths<sup>2</sup>. The number of micro, small and medium-sized enterprises (MSMEs) in Tanzania is estimated to be 3.1 million, and they are owned and run by 2.7 million people (URT, 2012). Tanzania is regarded as one of the rapidly emerging economies south of the Sahara in Africa, with a GDP growth rate of about 7%. MSMEs are estimated to contribute 27% to this GDP (URT, 2012). These numbers provide justification for our focus on Tanzania.

Data for this study were obtained from a national survey on MSMEs in Tanzania. The objective of the survey<sup>3</sup> was to provide a representative national baseline of the MSME segment in Tanzania so as to make statistically significant statements on a regional basis possible. The survey established Enumeration Areas (EAs) within the country, which were used to identify MSME owners for interviews. In each EA, a complete listing of households was made so as to identify all households that either currently owned and ran a small business or had done so previously. The respondents were required to be aged 16 and over (URT, 2012).

The data collection led to a total of 6,134 observations, representing a response rate of 98%. In order to obtain a dataset of YOE's, we identified those respondents who, at the time of data collection (October 2010), were aged between 16 and 35 and owned and ran MSMEs. This left 3,098 observations, 51% of the original dataset.

The questionnaire that was administered to the respondents covered 20 different topics, with 192 questions focusing on the entrepreneurs' profile,

<sup>2</sup> Information retrieved from the National Bureau of Statistics: [www.nbs.go.tz](http://www.nbs.go.tz)

<sup>3</sup> The survey was commissioned and funded by the Financial Sector Deepening Trust, hosted by the Ministry of Industry and Trade (MIT), in partnership with the National Bureau of Statistics, Steadman Associates (Synovate) and FinMark Trust South Africa, which provided technical assistance.

business profile, markets, finance, management practices, business support services, business performance and livelihood demographics (URT, 2012).

For the purpose of our study, we understand that informational constraints may be an issue because it is possible that capable entrepreneurs may have better access to BDS services than incapable ones, and this could lead to a self-selection problem. However, this problem was reduced by the rigorous survey methodology applied (URT, 2012).

The definitions of enterprise categories adopted were based on those used by the Government of Tanzania and are summarized in Table 1 below.

**Table 1.** Government of Tanzania's categorization of business size

Business size	Number of employees	Capital investment in machinery (Tanzanian Shillings)
Micro enterprise	1 to 4	Up to 5 million
Small enterprise	5 to 49	Above 5 to 200 million
Medium enterprise	50 to 99	Above 200 to 800 million
Large enterprise	100+	Above 800 million

Source: URT (2003).

## Variables and measures

### *Dependent variables*

The dependent variables in this study are performance-related variables. Various performance measures are suggested in the literature. We use **number of employees**, defined as the logarithm of the number of employees of the enterprise at the time of the interview. The second dependent variable is **financial records**, measured as a binary variable equal to 1 if the enterprise keeps all business records in a book of accounts or ledger book and 0 otherwise. We also use **perceived YOE performance**, a binary variable equal to 1 if the young entrepreneur perceived his/her business as growing and 0 if constant or declining.

### *Independent variables*

YOE's access a variety of BDS services. We selected four such services as our independent variables. First, **expert advice** is a binary variable equal to 1 if in the previous twelve months the enterprise had received any expert advice from outside the business to improve operations, performance and/or productivity, and 0 otherwise. **Business management training** is a binary variable equal to 1 if the business (owner or any employee) was aware of and had received business management training, and 0 if not. **Entrepreneurship training** is a binary variable equal to 1 if the business (owner or any employee)

was aware of and had received entrepreneurship training and 0 if not. **Business plan development** is a binary variable equal to 1 if the business had received support or assistance in developing a business plan and 0 otherwise. **Technical skills training** is a binary variable equal to 1 if the business owner had received related technical skills before or after starting the business and 0 otherwise (URT, 2012).

### **Control variables**

We use a set of control variables related to the young entrepreneur and the enterprise in order to control for other effects. For the entrepreneurs, we use **gender**, defined as a binary variable equal to 1 if the entrepreneur is male and 0 if female. **Education level** is a binary variable equal to 1 if the entrepreneur has post-secondary education and 0 otherwise. For the YOE, we use the following: **YOE age** is the number of years from the year in which the enterprise started operations to the year of the interview (2010). We normalize this variable by taking its natural logarithm. **Ownership** is a binary variable equal to 1 if the business is owned by one person (sole proprietor) and 0 otherwise. **Registration** is a binary variable equal to 1 if the enterprise is registered with either the tax authority or the business registration and licensing authority and 0 otherwise. **Business sector** is a binary variable equal to 1 if the enterprise offers service related products such as retailing, wholesaling or consultancy, and 0 if the enterprise is involved in either manufacturing or agriculture.

### **Model and analysis**

We performed three sets of analysis. First, we carried out a descriptive analysis of the profile of young entrepreneurs (Table 2 and Figure 1). This gave a picture of the type of youths that are running businesses. Next, we calculated summary statistics and performed correlation analyses of all the variables included in our study (Table 3). The objective was to understand our dataset and the nature of the variables by examining the means and standard deviations. Finally, we conducted an econometric analysis to test the hypothesis that there is a positive relationship between young entrepreneurs that have acquired BDS support and the performance of their enterprises. Here, we used regression analysis, the ordinary least squares method for the number of employees variable and probit regression for the financial records and perceived performance variables (Hair, Balck, Babin, Anderson and Tatham, 2008). Each independent variable was tested individually together with the control variables. The empirical model used to test the hypothesis was as follows:

*Performance of YOE (measured in number of employees, financial records and perceived YOE performance) = constant + <sub>1</sub> expert-advice + <sub>2</sub> business-management-training+ <sub>3</sub> entrepreneurship-training+ <sub>4</sub> business-plan-development + <sub>4</sub> technical-skills-training + <sub>4</sub> control-variables + E*

---

## RESULTS AND DISCUSSION

### Profile of young entrepreneurs in Tanzania

This section gives a brief profile of the young entrepreneurs in our dataset. We looked at their age, gender and education. As seen from Table 2, 73% of the young entrepreneurs were between 25 and 35 years of age. Only 27% were aged between 16 and 25. This may have two implications. First, as suggested by Chigunta (2002), the 16-25 age group contains both pre-entrepreneurs who are in transition from the security of the home or education to the workplace, and budding entrepreneurs who have started to run enterprises and are gaining some experience and skills. These entrepreneurs are still few in number and need more years to gain knowledge, skills and experience. The second implication is that it appears that youths in Tanzania finish their primary education at an older age than elsewhere in the world and are therefore late in starting businesses. This is also seen in Figure 1, which shows that 77% of the youths in our dataset had received primary education.

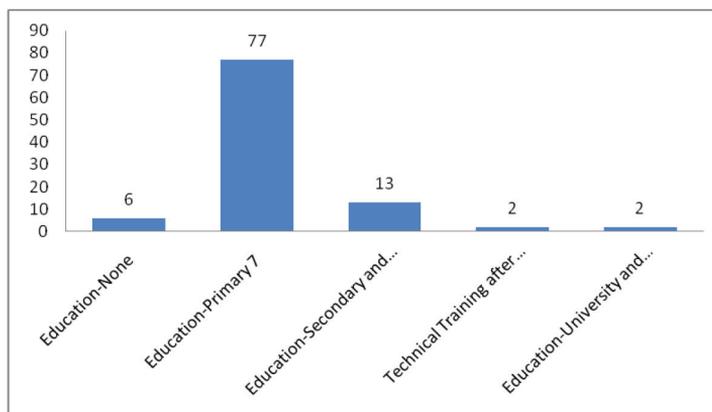
In addition, we found that (Figure 1) very few of the young entrepreneurs had been educated above primary level. This implies that most young entrepreneurs have a low level of education, which means they may not have enough skills and knowledge to run their enterprises successfully. As a result, BDS is even more necessary for these youths if their businesses are to grow and perform better. This result backs up the argument of Snee and Devine (2014) that youths' next step after school is influenced by the context in which they find themselves, and that the choices they make are shaped by structural and material constraints. In this case, the context of most youths in Tanzania is rural, and there are limited resources to support them in further studies.

In terms of gender, females dominate the sample, comprising 55.7% of the youths engaged in business in our sample. This is in line with the literature that indicates that more women are involved in owning and running SMEs (Carter and Allen, 1997; Mori, 2014; Stevenson and St-Onge, 2005). Also, 74% of the youths are married. This suggests that youths get married at a younger age in Tanzania, forcing them to engage in running businesses to support their families (Nilan, 2008).

Table 2 further shows that 67.7% of these youths are the main contributors to their families. This is supported by the fact that most of them run their business on a full-time basis (80.8%) and the business is their main source of income (61.1%). These results support the literature that indicates that YOEs have a major impact not only on youth employment but also on economic and social development (Omundi, 2013).

**Table 2.** Profile of Young Entrepreneurs (Aged 16 to 35 years)

	Percent	Obs.
<b>Age</b>		
16-24	26.50	3098
25-35	73.50	3098
<b>Gender</b>		
Female	55.70	3098
Male	44.30	3098
<b>Education Level</b>		
No education	6.00	3098
Primary completed	77.00	3098
Secondary completed	13.00	3098
Technical education	2.00	3098
University education	2.00	3098
<b>Marital Status</b>		
Single	16.10	3098
Married/Partner	74.90	3098
Divorced	6.80	3098
Widowed	2.10	3098
<b>Economic Profile</b>		
Main income contributor in family	67.80	3098
Running a business full time	80.80	3098
This business is the main source of income	61.10	3098



**Figure 1.** Young entrepreneurs and education level

### Summary statistics of variables in the study

Table 3 shows the summary statistics of the variables included in this study. We used three different performance indicators as our dependent variables. We found the average number of employees of the YOE to be 3. According to the MSME categorization, this means that most of the YOE are micro enterprises with between 1 and 4 employees (URT, 2003). This further implies that youths are certainly generating employment for themselves but are yet to create employment for other youths. We also found that 45% of the youths kept financial records for their businesses. This is crucial because recent literature shows that most micro entrepreneurs do not tend to separate their business and household income; all income obtained from the business is combined and spent on household matters without proper records being kept. In our sample, 63% of the young entrepreneurs perceived their business to have grown since they had started it. This could be attributed to, among other factors, having access to BDS services which had helped change their attitude to self-employment and entrepreneurship.

In terms of the independent variables, namely capturing the use of BDS services, we found that 12% of the young entrepreneurs had received outside expert advice, including legal, accounting and auditing advice. We also found that only 6% of the youths had received business management training, 10% of the young entrepreneurs or their businesses had received entrepreneurship training, and 10% had received assistance with developing business plans. Technical skills training were the BDS service that had been accessed by the most youths in our dataset (14%). This includes vocational training received by young entrepreneurs or their employees. In summary, we found that very few youths had been able to access BDS services. This

supports the literature indicating that few SME owners are able to access such services, with negative effects on the performance of their enterprises (Chigunta, 2002).

The YOEs were quite young, with an average age of 3.7 years. 97% of the YOEs were sole proprietors and only 7% were registered with national registration authorities, meaning that the majority were informal. Only 29% of the YOEs were operating in the service sector, implying that the majority operated in the manufacturing sector.

**Table 3.** Summary statistics

	Percent	Obs.	Min	Max
<b>Dependent Variables</b>				
Number of employees	2.00	2860	1.00	84.00
Financial records	45.00	3098	0.00	100.00
Perceived YOE performance	63.00	3098	0.00	100.00
<b>Independent Variables</b>				
Expert advice	12.00	3098	0.00	100.00
Business management training	6.00	3098	0.00	100.00
Entrepreneurship training	10.00	3098	0.00	100.00
Business plan development	10.00	3098	0.00	100.00
Technical skills training	14.00	3098	0.00	100.00
<b>Control Variables</b>				
YOE age	3.65	2560	0.50	12.56
Ownership (sole proprietorship)	97.00	1730	0.00	1.00
Registration	7.00	3090	0.00	1.00
Business sector (service)	29.00	1500	0.00	1.00

### Correlation analysis

Table 4 presents the correlations between the variables. First, we look at the correlations among the performance variables. As seen in the table, even though these variables are separate constructs, some of them are significantly related. For example, keeping financial records is significantly correlated with the number of employees (coefficient 0.09). Perceived performance is also significantly correlated with number of employees (coefficient 0.06) and financial records (coefficient 0.29). To reduce the combined effects

on correlated dependent variables we ran separate regressions for each dimension.

The correlations between the dependent and independent variables provide the first simple test of our hypothesis and we see that a number of them are consistent with our hypothesis. First, the number of employees is positively and significantly correlated with technical skills (coefficient 0.14), YOE's age (coefficient 0.07) and registration status (coefficient 0.12). This implies that the enterprise is able to increase the number of employees when the owner receives technical skills training and when the enterprise grows and is registered. Keeping financial records is positively associated with several BDS service variables: expert advice (coefficient 0.07), business management training (coefficient 0.12), entrepreneurship training (coefficient 0.14) and business plan development (coefficient 0.16). Similarly, the young entrepreneurs perceived that their business performance had improved after they had received business management training (coefficient 0.11), entrepreneurship training (coefficient 0.09) and support for business plan development (coefficient: 0.12).

We are also aware of the possibility of multicollinearity among the independent variables. As seen in Table 4, the correlation coefficients among the independent variables are rather low, with the highest being between entrepreneurship training and business plan development (0.33). Kennedy (2008) holds that correlations need to be above 0.7 to indicate multicollinearity between the two variables. None of the coefficients is this high. In addition we calculated variance inflation factors (VIFs), which describe how much multicollinearity (correlation between independent variables) there is. Since none of these factors exceeds 5, we can conclude that multicollinearity is not problematic in this study.

**Table 4.** Correlation analysis

	2	3	4	5	6	7	8	9	10	11	12	13	14	VIF
1 Number of employees	0.09*	0.06*	0.06	-0.01	0.03	0.02	0.14*	0.07*	-0.20*	0.12*	0.01	0.13*	0.09*	
2 Financial records		0.29*	0.07*	0.12*	0.14*	0.16*	0.05	0.04	-0.03	0.16*	0.01	0.22*	0.20*	
3 Perceived YOE performance			-0.01	0.11*	0.09*	0.12*	0.04	0.03	-0.01	0.09*	-0.12*	0.11*	0.09*	
4 Expert advice				0.19*	0.14*	0.13*	0.09*	0.01	0.04	0.09*	0.03	0.04*	0.05*	1.18
5 Business management training					0.44*	0.29*	0.24*	-0.02	-0.06	0.09*	0.23*	0.06	0.03	1.43
6 Entrepreneurship training						0.33*	0.30	0.03	-0.03	0.12*	0.08	0.04	0.07	1.30
7 Business plan development							0.17*	0.08	-0.01	0.22*	0.35*	0.18*	0.10*	1.34

---

8	Technical skills training	0.02	-0.05	0.05	0.07	-0.07*	0.16*	1.14
9	YOE age		0.01	0.02	0.03	0.08*	0.05*	1.15
10	Ownership			-0.05*	0.06	-0.04	-0.28*	1.16
11	Registration				-0.08	0.08	0.12*	1.25
12	Business sector (service)					-0.16*	0.08	1.06
13	Gender						0.04	1.06
14	Education level							1.00

---

\* p < 0.05

### Econometric results

Does access to BDS services affect the performance of YOE? To find out, we ran regressions between different types of BDS as the independent variables, and YOE performance. In order to see the effect of each type of BDS, we included each service variable in the regression, one at a time, running pooled OLS for the number of employees and probit regressions for financial record keeping and perceived performance. Table 5 presents the results, panel A for number of employees, panel B for financial record keeping and panel C for perceived performance.

Generally, our results show that BDS services matter in terms of improving YOE's performance. Panel A shows that expert advice and technical skills are significantly associated with more employees (coefficient 0.17,  $p < 0.001$ ). This implies that access to these services is important in enabling an enterprise to grow (Matlay, Boter and Lundström, 2005). Panel B provides more support for our hypothesis. We can see that the ability to keep financial records is positively associated with obtaining expert advice (coefficient 0.81,  $p < 0.001$ ), business management training (coefficient 0.69,  $p < 0.05$ ), entrepreneurship training (coefficient 0.57,  $p < 0.001$ ) and support for business plan development (coefficient 0.671,  $p < 0.05$ ).

The literature shows that SMEs, including YOE, are in most cases not trained or proficient in accounting or financial management, which means that most will need access to support services in order to gain expertise in and assistance with keeping financial business records (Berry et al., 2006). Our results provide evidence that those entrepreneurs who were able to access different types of BDS services and training were those who kept financial records. Being able to keep financial records is an important indicator that financial institutions use when offering loans to enterprises. Mori and Richard (2012), for example, show that one of the reasons why financial institutions find it difficult to lend to SMEs is their inability to keep

proper financial records and their poor financial management. This challenge might be reduced if more YOE were able to access BDS services.

Panel C provides interesting results in terms of the associations between perceived performance and both business management and entrepreneurship training. The results are significantly positive for both (coefficient 0.69,  $p < 0.05$ ; coefficient 0.35,  $p < 0.05$ , respectively). These results suggest that young entrepreneurs with exposure to such training perceive that their businesses are performing well, probably due to the nature of the training, which normally exposes participants to entrepreneurial tendencies, such as the need to achieve and be successful (De Gobbi, 2014; Kilonzo, 2012). In addition, this training helps participants to see their business as a success and contributes greatly to changing entrepreneurs' mindsets (Olomi, 2010). With this evidence, we argue that young entrepreneurs who have received training will perceive that their business is performing well because of a change in their mindset.

From these results, we can see that BDS services are a critical resource that YOE need in order to improve their performance, both that of the young entrepreneurs themselves and that of their enterprises. The results reveal that no single BDS service influences all performance measures. We found that external advice affected the number of employees and the keeping of records. We found that business and entrepreneurship training affected financial record keeping and perceived performance. This implies that YOE need to access a mixture of BDS services in order to build their competitive advantage. This is in line with Chigunta (2002), who suggests that young entrepreneurs need to access an integrated package of BDS services that include skills training, business counseling, mentor support, access to workspace, business expansion support, and the creation of support networks.

**Table 5.** Dependent variables regressed with BDS Services

<b>Panel A: Ordinary Least Squares-Number of Employees (Ln)</b>					
<b>Independent Variables</b>	1	2	3	4	5
Expert advice	0.17***				
Business management training		-0.41			
Entrepreneurship training			0.016		
Business plan development				-0.34	
Technical skills training					1.17***
<b>Control Variables</b>					
YOE age	0.03***	0.09**	0.06***	0.14**	0.07***

Ownership	-1.86***	-6.47***	-3.39***	-10.38***	-3.58***
Registration	0.70***	1.12***	1.11***	1.79**	1.29***
Business sector	0.03	0.04	-0.04	-0.03	0.10
Education level	0.01	0.01	0.01	0.01	0.01
Gender	0.18***	0.20*	0.12	0.14	0.14
<b>N</b>	3095	531	1097	261	728
<b>adj. R<sup>2</sup></b>	0.10	0.12	0.11	0.18	0.11

**Panel B: Probit Regression-Financial Records**

<b>Independent Variables</b>	1	2	3	4	5
Expert advice	0.81***				
Business management training		0.69**			
Entrepreneurship training			0.57***		
Business plan development				0.67*	
Technical skills training					0.14
<b>Control Variables</b>					
YOE age	0.01	0.03*	-0.01	0.03	-0.01
Ownership	-0.16	-0.05	-0.22	-0.72	-0.56**
Registration	0.81***	0.75***	0.89***	1.19***	0.94***
Business sector	0.04	0.04	0.11	-0.09	0.20**
Education level	0.06***	0.04	0.07***	0.05	0.04*
Gender	0.19***	0.18	0.24***	0.30*	0.17
<b>N</b>	3095	531	1097	261	728
<b>Pseudo R<sup>2</sup></b>	0.14	0.12	0.23	0.08	0.10

**Panel C: Probit Regression-Perceived Performance**

<b>Independent Variables</b>	1	2	3	4	5
Expert advice	-0.15				
Business management training		0.69**			
Entrepreneurship training			0.35**		
Business plan development				0.52	
Technical skills training					0.13
<b>Control Variables</b>					
YOE age	0.01	0.01	0.01	0.01	0.01
Ownership	-0.07	0.39	-0.03	-0.05	0.10
Registration	0.49***	0.52***	0.53***	0.57**	0.54***
Business sector	-0.12*	0.04	-0.10	0.20	0.05
Education level	0.02	0.01	0.05**	0.05	0.03

Gender	0.02	0.18	-0.02	0.10	0.13
<b>N</b>	3095	531	1097	261	728
<b>Pseudo. R<sup>2</sup></b>	0.07	0.18	0.07	0.09	0.10

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Our results provide support for the RBV, which argues that entrepreneurs build their businesses from the resources and capabilities they possess and acquire (Terziovski, 2010). BDS services are resources that, when an enterprise receives them either through the owner or the managers, help the enterprise to build a competitive advantage compared to other businesses.

The control variables also exhibit significant effects on YOEs. In terms of the enterprise's age, panel A shows a positive relationship between the enterprise's age and the number of employees. This is in line with Mori and Mersland (2014), who suggest that an enterprise's age matters for organizational growth. The results for ownership status suggest that sole proprietorship is negatively associated with YOEs' performance. We obtained negative significant results throughout all panels. This has two implications. Single-owner enterprises face the challenge of having limited managerial knowledge, experience and expertise available when making strategic, value-creating decisions. This may result in limited growth and poor performance. In addition, Chittenden, Hall and Hutchinson (1996) argue that such enterprises are perceived to have high adverse selection problems. This would mean they would face a higher risk of not being funded by banks, hence limiting their performance. The registration variable also provides interesting results throughout all panels, with registration mattering to the performance of YOEs. Most SMEs in Tanzania are unregistered, implying that the entrepreneurs are limiting themselves when it comes to achieving high growth and good performance. The results further show that there are significant associations between being a male entrepreneur and performing well, especially with regards to keeping financial records and employing more people.

## CONCLUSION AND IMPLICATIONS

This study examined the extent to which access to different forms of BDS services, as part of enterprises' critical resources, affects their performance. We focused on YOEs because youths form the basis of a society's future. The BDS services we examined were expert advice, business management training, entrepreneurship training, support with developing a business plan and technical skills. The performance measures examined were the number

---

of employees, the keeping of financial records and perceived enterprise performance.

We used the RBV as our theoretical perspective because BDS forms part of the young entrepreneur's critical resources and is important for the performance of the enterprise. The theory further argues that differences in performance between YOE's are explained through differences in enterprises' human and financial assets and resources and their application, rather than through differences in industry structures. We therefore hypothesized that YOE's with access to BDS resources would perform better than those without. The empirical analysis was based on a MSME baseline dataset that was collected in 2010. The dataset covers the whole of Tanzania. We extracted data on young entrepreneurs between 16 and 35 years of age in 2010. The resulting youth dataset had 3,098 observations.

The results show support for a relationship between access to BDS and YOE's performance. We found that access to expert advice was positively associated with YOE's number of employees and their ability to keep financial records. We also found that business management and entrepreneurship training positively influenced financial record keeping and enterprises' perceived performance. Together, these results show that the resources young entrepreneurs obtain through accessing BDS services are important for their enterprises.

### **Theoretical and practical implications**

A topic that has seen an escalation in research of late is youth employment and youth entrepreneurship (ILO, 2011; Schoof, 2006). This paper contributes to the youth entrepreneurship literature by showing the extent to which support for youth is important for enhancing economic and social development. Olomi and Nchimbi (2009) indicate that youth entrepreneurship and employment development should be looked at from the perspective of a varied set of interventions. They argue that such interventions should include, among others, the promotion of entrepreneurial values and skills, the imparting of business management and/or technical skills, and the provision of access to workspace, equipment, tools, facilities and technology, linkages to markets, professional services, business information, technology, finance, ongoing mentoring and counselling. These are also key resources that, according to the RBV, when provided to youths, are likely to enhance the performance of their enterprises (Ng'habi, 2013).

In addition, since most young entrepreneurs are poorly educated, it is important for them to access BDS as it is a crucial resource that will help build their entrepreneurial and business management capacity. Accessing BDS is

also argued to be a third challenge (after finance and markets) that most SMEs face (Mori, 2014). Thus, it is important to understand the role that BDS plays in enhancing enterprises' performance.

Finally, Tanzania is one of the countries currently facing a high youth unemployment rate (Ng'habi, 2013). Improving our knowledge of how young people can engage in businesses successfully and provide employment for themselves and others may help to highlight the key capacities they need to be provided with so that economic development can be increased.

This study has several limitations. First, there is potential for reverse causality among the variables, which may lead to an endogeneity problem (Hermalin and Weisbach, 2003). Also there is a possibility of omitted variable bias, meaning that variables not included in this study could affect both the independent and dependent variables (Larcker and Rusticus, 2007). Endogeneity problems may be solved by means of instrumental variable methods. However, in the context in which this study was conducted and with the dataset available, we were unable to come up with a credible instrumental variable. For this reason, our results must be interpreted in terms of associations rather than causal relations. We do acknowledge, therefore, that conclusions from our study can only be drawn cautiously.

The other limitation of the study is the fact that it is based in Tanzania only, and the results may not be generalizable to the rest of the world. The study further lacks a deep knowledge of youth views and experiences of accessing BDS. A case study approach could be used to follow up on this study and address young entrepreneurs' opinions and experiences of how BDS services have affected their businesses.

## References

- Amorós, J. & Bosma, N. (2013). *Global Entrepreneurship Monitor: 2013 Global Report*. GEM. Babson.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120. doi: 10.1177/014920639101700108.
- Berry, A., Sweeting, R. & Goto, J. (2006). The effect of business advisers on the performance of SMEs. *Journal of Small Business and Enterprise Development*, 13(1).
- Carter, N. & Allen, K. (1997). Size determinants of women-owned businesses: choice or barriers to resources? *Entrepreneurship & Regional Development*, 9(3), 211-220.
- Chigunta, F. (2002). *Youth Entrepreneurship: Meeting the Key Policy Challenges*. Unpublished manuscript. Wolfson College, Oxford University, England.
- Chittenden, F., Hall, G. & Hutchinson, P. (1996). Small firm growth, access to capital markets and financial structure: Review of issues and an empirical investigation. *Small Business Economics*, 8(1), 59-67.

- De Gobbi, M. (2014). Making Youth Entrepreneurship Work in Sub-Saharan Africa: Some Factors of Success. *Open Journal of Business and Management*, 2, 305-313.
- Fairlie R. (2005). Entrepreneurship and earnings among young adults from disadvantaged families. *Small Business Economics* 25: 223-236.
- Garba, A. & Djafar, F. (2013). Evidence of Opportunity and Necessity Driven Entrepreneurship in Nigeria. *Journal of Entrepreneurship, Management and Innovation*, 9(3).
- Green, F. (2013). *Youth Entrepreneurship*. Background paper for the OECD Centre for Entrepreneurship, SMEs and Local Development, OECD.
- Hair, J., Balck, B., Babin, B., Anderson, R. & Tatham, R. (2008). *Multivariate Data Analysis* (Vol. 6). Prentice Hall New Jersey
- Hermalin, B. E. & Weisbach, M. S. (2003). *Board of Directors as an Endogeneously Determined Institution: A Survey of the Economic Literature* (p. 25). Unpublished
- ILO.(2011). *Youth Entrepreneurship Facility: Unleashing African Entrepreneurship*. Programme Document. International Labour Organization.
- Kennedy, P. (2008). *A guide to econometrics*. Malden, MA: Blackwell Publishing.
- Kilonzo, P. (2012). *Policy and Strategic Options for Enhancing the Performance of Youth-Run Enterprises in Kenya*. Investment Climate and Business Environment Research Fund. Accessed in August, 2014
- Koe, W. (2013). Entrepreneurial Orientation (EO) and Performance of Government-Linked Companies (GLCs). *Journal of Entrepreneurship, Management and Innovation*, 9(3), 20.
- Larcker, D. F. & Rusticus, T. O. (2007). Endogeneity and empirical accounting research. *European Accounting Review*, 16(1), 207-215.
- Lerner, M. & Almor, T. (2002). Relationships among Strategic Capabilities and the Performance of Women-Owned Small Ventures. *Journal of Small Business Management*, 40(2), 109-125. doi: 10.1111/1540-627x.00044.
- Lewis, K. & Massey, C. (2003). Delivering enterprise education in New Zealand. *Education + Training*, 45(4), 197-206.
- Manacorda, M. & Konydylis, F (2006). Youth in the Labor Market and the Transition from School to Work in Tanzania. *Youth in Africa's Labor Market*. Accessed in November, 2014
- Matlay, H., Boter, H. & Lundström, A. (2005). SME perspectives on business support services. *Journal of Small Business and Enterprise Development*, 12(2), 244-258. doi: doi:10.1108/14626000510594638.
- Mori, N. (2014). *Women Entrepreneurship Development in Tanzania*. International Labour Organization.
- Mori, N. & Mersland, R. (2014). Boards in microfinance institutions: how do stakeholders matter? *Journal of Management and Governance*, 18(1), 1-29. doi: 10.1007/s10997-011-9191-4.
- Mori, N. & Richard, E. (2012). SMEs' Access to Financial Services: Tanzanian Bankers' Eye. *Chinese Business Review*, 11(2), 217-223.

- Mori, N. (2014). Women Entrepreneurship Development in Tanzania: International Labour Organization.
- Ng'habi, S. (2013). *Youth Entrepreneurship in Tanzania: Situation Analysis on Secondary Baseline Data for Youth Entrepreneurship Facility*. ILO.
- Niemelä, T. & Häkkinen, R. (2014). The role of pluriactivity for continuity and survival in family farm firms. *Journal of Entrepreneurship, Management and Innovation*, 10(4).
- Nilan, P. (2008). Youth transitions to urban, middle-class marriage in Indonesia: faith, family and finances. *Journal of Youth Studies*, 11(1), 65-82. doi: 10.1080/13676260701690402.
- Olomi, D. (2010). *Survey of Bachelor of Commerce Graduates of the University of Dar es Salaam Business School*. DANIDA: The Institute of Management and Entrepreneurship Development (IMED).
- Olomi, D. & Nchimbi, M. (2009). *A Concept Note For Establishing Youth Entrepreneurship Centres in Zanzibar*. International Labour Organization (ILO).
- Omundi, P. (2013). *Youth Enterprise: Inhibiting Factors and Opportunities*. Africa Data and Information Network.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179-191. doi: 10.1002/smj.4250140303.
- Schoof, U. (2006). *Stimulating Youth Entrepreneurship: Barriers and incentives to enterprise start-ups by young people*. Small Enterprise Development Programme, ILO.
- Shelley, A. (2014). Active Learning Innovations in Knowledge Management Education Generate Higher Quality Learning Outcomes. *Journal of Entrepreneurship, Management and Innovation*, 10(1), 129-145.
- Snee, H. & Devine, F. (2014). Taking the next step: class, resources and educational choice across the generations. *Journal of Youth Studies*, 17(8), 998-1013. doi: 10.1080/13676261.2014.881987.
- Stevenson, L. & St-Onge, A. (2005). *Support for Growth-oriented Women Entrepreneurs in Tanzania*. Programme on Boosting Employment through Small Enterprise Development Job Creation and Enterprise Department, International Labour Organization (ILO).
- Stevenson, L. & St-Onge, A. (2013). National Assessment of Women's Entrepreneurship Development (WED) Framework Conditions: Assessors Guide. *Women's Entrepreneurship Development Programme (ILO-WED)* (pp. 155), ILO.
- Sukarieh, M. & Tannock, S. (2008). In the best interests of youth or neoliberalism? The World Bank and the New Global Youth Empowerment Project. *Journal of Youth Studies*, 11(3), 301-312. doi: 10.1080/13676260801946431.
- Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view. *Strategic Management Journal*, 31(8), 892-902. doi: 10.1002/smj.841.

- URT - United Republic of Tanzania. (2003). *SME Development Policy*. Ministry of Industry and Trade (MIT).
- URT - United Republic of Tanzania. (2007). *National Youth Development Policy*. Ministry of Labour and Youth Development.
- URT - United Republic of Tanzania. (2012). *National Baseline Survey Report for Micro, Small, and Medium Enterprises in Tanzania*. Ministry of Industry and Trade (MIT).
- Walstad, W. & Kourilsky, M. (2008). *Entrepreneurial Attitudes and Knowledge of Black Youth*. Kauffman Centre for Entrepreneurial Leadership. accessed online in November 2014.
- Wanjiru, C. (2013). *Factors Influencing the Performance of Youth Owned Micro and Small Enterprises: A Case of Kiambu*. Unpublished manuscript, University of Nairobi, Kenya.
- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, 5(2), 171-180.

### **Abstrakt (in Polish)**

*W pracy zbadaliśmy próbę 3098 tanzańskich, losowo wybranych przedsiębiorstw należących do osób młodych (YOE) oraz przestudiowaliśmy ich dostęp do usług wspierających rozwój biznesu (BDS). YOE definiuje się jako przedsiębiorstwa prowadzone przez młodych przedsiębiorców, w wieku od szesnastu do trzydziestu pięciu lat, zgodnie z obowiązującą w Tanzanii definicją młodzieży. Przeanalizowaliśmy które usługi BDS wpływają na wyniki działalności w zakresie: (i) liczby pracowników, (ii) czy przedsiębiorstwo prowadzi dokumentację finansową i (iii) postrzegania przez przedsiębiorców efektywności ich przedsiębiorstw. Opierając się na podejściu zasobowym (RBV), stwierdziliśmy, że dostęp do porad ekspertów jest pozytywnie powiązany z liczbą pracowników zatrudnianych w YOE i umiejętnością prowadzenia ewidencji finansowej w tych przedsiębiorstwach. Zaobserwowaliśmy również, że dostęp do szkoleń w zakresie zarządzania i przedsiębiorczości pozytywnie wpływa na prowadzenie dokumentacji finansowej i postrzeganie wydajności przedsiębiorstw. Podsumowując, możemy stwierdzić, że środki, które młodzi przedsiębiorcy zyskują poprzez dostęp do usług BDS są kluczowe dla działalności ich przedsiębiorstw.*

**Słowa kluczowe:** młodzież, usługi rozwoju biznesu, BDS, YOE, Tanzania.

### **Biographical note**

**Dr. Neema Mori** holds a PhD in International Management from the University of Agder, Norway; an MBA and BCom from University of Dar es Salaam, Tanzania. Currently, she is a Lecturer at Department of Finance of University of Dar es Salaam, Tanzania and a part time Postdoctoral researcher at the Norwegian Centre for Microfinance Research, University of Agder, Norway. Her research interests are in Microfinance, Corporate Governance of Small and Medium Enterprises and Entrepreneurial Finance.



---

# Money cares. Institutional Entrepreneurship in the Finnish Social Services Sector

Petra Merenheimo<sup>1</sup>

---

## **Abstract**

*In this article, actions within care marketization are conceptualized as institutional entrepreneurship contesting the present practices of care production. Practices of selling and buying care are described, and the underlying power relations in two care marketization models are analyzed: outsourcing and the so called 'second wave', i.e. the customer choice model, in Finland. Drawing from Bourdieu's concepts of cultural, symbolic, social and economic capital, the article highlights the relevance of capital conversions for understanding institutional entrepreneurship. It is argued that the positions and opportunities to gain a more powerful position are not solely field intern conceptions, but can be related to macro level conceptions. Exploiting such opportunities questions the challenging conception of institutional entrepreneurship, itself. Instead, it is suggested that institutional entrepreneurship can also be conceived as legitimate challenging which points that challenging and conforming may not be necessary to be separated.*

**Keywords:** Bourdieu, care marketization, institutional entrepreneurship, opportunities.

---

## **INTRODUCTION**

Care marketization is described as a neoliberal wave transforming the present care system (Anttonen and Häikiö, 2011; Koskiahho, 2008). In Finland, there is a strong public call for innovative entrepreneurs that would contribute to cost savings within the ageing society and its growing need for caring services (KTM 2005; STM 2008). Entrepreneurs can be perceived as entities fighting the pressure of this cost efficiency through innovating high value care based on care professionalism. On the other hand, entrepreneurs can also be entities innovating new forms of cost efficient care, which means in fact those within the cost pressure itself. Entrepreneurial entities are often perceived as either socially or economically motivated (Tillmar, 2009). Care

---

<sup>1</sup> Petra Merenheimo, Diplom-Kauffrau, University of Lapland, Yliopistonkatu 8, 96300 Rovaniemi, Finland. Tel.: +358 16 341341. E-mail: petra.merenheimo@ulapland.fi.

---

professionalism based entrepreneurship, however, mostly gets labelled as socially motivated non-growth self-employment, or as small business, at the most. What is entrepreneurial, at the end, within care marketization? The discussion around care sector innovation-driven entrepreneurship resembles reminds of the theoretical dilemma within institutional entrepreneurship (IE): can an entrepreneur challenge the rules he or she she acts within?

Since the ongoing process of care marketization is often conceived as challenging the present practices of care provision, it offers an interesting context to study IE. Recent research argues that certain field positions offer better opportunities for institutional change, than others. This is because dominating positions imply better resources to induce change, whereas the dominated positions lack resources (Battilana, 2006; Leca, Battilana and Boxenbaum, 2008). However, not all actors are motivated to change the status quo. Newcomers are said to be more likely to challenge the institutional practices, whereas insiders mainly fit in to them (De Clercq and Voronov, 2009a). This is because newcomers are outsiders to the context, whereas especially those insiders who have a dominating position within the context, may have more to lose. Contextual breaks are regarded as a source for innovations and contextual change (Mutch, 2007).

Scholars point out that it is possible for actors to move from one position to another and so gain more power, i.e. 'position-taking', which are acts of differentiation from other field participants (Emibayer and Johnson, 2009). They, therefore, represent challenging actions. Recent research points out that although such challenging acts can be reverted to certain individual actors, institutional change is not accomplished by one actor, only (Powell and Bromley, 2013). Whether an act results in a change within its context, or not, it is, instead, a result of field level negotiations (Lounsbury and Crumley, 2007) and acceptance (De Clercq and Voronov, 2009a). Research on institutional entrepreneurship increasingly acknowledges the interplay between single challenging acts and context, and between opportunities and power. This article argues, however, that the conforming and challenging character of entrepreneurial acts cannot be necessarily distinguished from each other. Instead, it demonstrates how even newcomer challenging acts in fact can be based on legitimate conceptions of the field. Furthermore, these conceptions can be related to wider macro level understandings, which means that whether an act is perceived as challenging or not, it is not an entirely field-intern matter.

In this article, care provision is conceptualised as institutional practices of the Nordic welfare model. Through marketization, these practices are changing. With help of Pierre Bourdieu's (1986) concept of capital, the article studies newcomer actions within this change, that are conceived as

challenging the Nordic welfare model. It explores positions in the field and relations between them. Conceptualising the field as power relations between positions, enables studying the challenging character of the newcomer entrepreneurial actions. The following chapter introduces recent research on institutional entrepreneurship and then explains the Bourdieusian concept of capital. The context of Finnish care marketization and the methodology is described in the next chapters. The sixth and seventh chapters analyse and discuss the capital forms and their relations in the care sector. The last section concludes the findings and their relevance for institutional entrepreneurship.

---

## LITERATURE REVIEW

### **Institutional entrepreneurship**

Mainstream entrepreneurship research conceives entrepreneurship as contributing to change in form of creating something new. Institutional entrepreneurship (IE) scholars trace such actions that pursue a change in their organizational context challenging present practices and the power structure (DeClercq and Voronov, 2009a, 2009b, 2009c) and the introduction of new practices (Lounsbury and Crumley, 2007). The concept of institutional entrepreneurship is traced back to DiMaggio (1988) who defines institutional entrepreneurs as ‘actors who mobilize resources to create new institutions or transform the existing ones’. The original conception of institutional entrepreneurship implies deliberate change (Greenwood and Suddaby, 2006). Recent research, however, highlights unintentional actions as well (e.g. Mutch, 2007).

IE scholarship increasingly questions the early belief that homogenizing pressures exert similar influences throughout the field (Powell, 2007). Instead of pointing to isomorphism, they seek to determine the conditions under which entrepreneurs are able to oppose institutional pressure and change existing rules. The focus is on unveiling the conditions that enable change, which Leca et al. (2008) divide into the following field characteristics: crisis (Fligstein, 1997, 2001), acute problems indicating crisis (Phillips et al. 2000; Fligstein and Mara-Drita, 1996), high level of heterogeneity (Seo and Creed, 2002), and low degree of institutionalisation (Maguire, Hardy, and Lawrence, 2004; Lawrence and Phillips, 2004). Other scholars emphasise the social position of the actor in the field, stating that position has an impact on access to relevant resources (e.g. Battilana, 2006). Institutional entrepreneurs appear as change agents, as modern princes contesting hegemony in the field (Levy and Scully, 2007). They are interest-driven, aware and calculative (Greenwood and Suddaby, 2006, p. 28). This heroic conception of

entrepreneurship has been criticised. For example Czarniawska (2009) calls the institutional entrepreneur an 'oxymoron', pointing to the embeddedness of the entrepreneur in the very structure it aims to change, which as such, is a contradiction. Instead, she notes, entrepreneurs and their characteristics are usually defined post hoc, *after* an institution has been established. Indeed, embedded agency is a widely acknowledged and puzzling paradox among institutional theorists (Battilana, 2006).

Feldman and Orlikowsky (2011) criticise that many institutional approaches regard institutions such as practices, as static. Leaning on Bourdieu's theory of practice (1972), Lounsbury and Crumley (2007) note that practices are institutions, activities that are fundamentally interpenetrated and shaped by broader cultural frameworks'. They involve a broad array of actors. Munir and Phillips (2005) have argued that institutional entrepreneurs take part in the creation of institutions through development of discourses. In doing so, they draw upon and are influenced by the context in which they operate. Hence, their innovative activities are 'significant only in relation to a number of other social changes taking place' (Munir and Phillips 2005, p. 1682). Furthermore, scholars point that structures are amenable to change at certain times. They point to the role of time (Buhr, 2012) and *Zeitgeist* in change (Czarniawska, 2009).

Finally, the concept of institutional *change*, has been discussed by scholars. Leaning on Bourdieu, Golsorkhi et al. (2009) they criticize the conception of radical institutional change. They argue that entrepreneurial activities imposing new rules and stakes may change the structure but not abolish it or its foundation. Hence, institutional change remains mainly limited to changes between the field's dominating and dominated positions. Concerning changes in the domination structure, De Clercq and Voronov (2009a) suggest that only the successful activities of those who enjoy innovative legitimacy lead to change. Their unsuccessful activities, and all the activities of actors without innovative legitimacy, merely reinforce the structure. In turn, Czarniawska and Wolff (1998) have pointed out that entrepreneurial failures can also result in the institutionalisation of new practices. Lounsbury and Crumley (2007) argue more neutrally that only activities with significant variation, as compared with the field's normal variation of activities, can result in change. Moreover, such change can only emerge through field negotiations, after which either the current field is revised or a new field of practice is created. All these approaches argue that the conditions for change are themselves embedded in the structure. According to Lounsbury and Crumley (2007), the process leading to change is therefore 'far beyond the scope of any powerful entrepreneur' (p. 1003). This interplay between agents and structure occurs because, despite their durable character, institutions do change through

performed actions, although this happens slowly and may not shake the fundamentals. The change may even be unintentional (Chiasson and Saunders, 2005). Since research mainly concentrates on successes that have been identified post hoc, the entrepreneurs involved are just described post hoc as decisive in their efforts (Czarniawska, 2009).

Most approaches on IE avoid studying power (Fligstein, 2008) or consider it to be related implicitly to isomorphism alone (Mohr and Neely, 2009, Lounsbury and Crumley, 2007). Lounsbury and Crumley (2007) argue that many approaches concentrate on studying 'how novel innovations or activities become established as taken-for-granted practices as a result of isomorphic diffusion' (p. 993). Recent research locates power to social positions (see Leca et al. 2008, for an overview). Battilana (2006) for example argues that due to their authority, individuals in higher positions are more likely to be able to conduct organizational changes. On the other hand, it is argued (e.g. Battilana, 2006; Leca et al., 2008), that actors at the margins such as individuals in lower status organizations or social groups are less favoured by the institutional arrangements. They have less to lose, and are, therefore, more likely to act as entrepreneurs challenging the current order. But these potential change agents in the margins are less likely to have the key resources needed for entrepreneurial actions (Battilana, 2006). De Clercq and Voronov, (2009c) also point to the importance of cultural and symbolic capital; knowing the rules and having influence on others, in order to be conceived as an institutional entrepreneur. All in all, there seems to exist a theoretical mix of conforming and challenging that is conceived entrepreneurial. How much questioning is possible, after all, in such a mix?

### **Bourdieu's concept of capital**

Bourdieu speaks of capital and power as virtual synonyms (e.g. Bourdieu, 2005). Power is related to the position in the field structure, which is in turn dependent on the composition and amount of capital - the 'capital portfolio' (Viale, 2008). Bourdieu (1986) emphasises four different forms of capital: cultural, social, symbolic and economic and thus refuses to downplay all social activities at the economic level. Instead of following an overall economic rationale, all the forms of capital and their valuation are field-specific and mutually convertible, but only in accordance with field-specific rules.

Bourdieu (1986) emphasises that *cultural capital* is strongly linked to the body. Acquiring cultural capital is an investment that requires time and often takes place through hereditary transmission under social disguised conditions. This makes it difficult to recognize. Even though cultural capital also can exist in an objectified state, it remains closely connected to the embodied state. In turn, cultural capital in an institutionalized form, such as qualifications

or certificates, presents a relative autonomous state of capital vis-à-vis its bearer, and even makes agents exchangeable (Bourdieu, 1986). Bourdieu (1986) underscores that his concept differs from the economic concept of human capital in the sense of academic ability or academic investment in that it underlines domestic transmission of the capital; investment made by the family prior to any academic investment. Furthermore, capital is always field-specific.

*Social capital* in Bourdieusian terms is a resource consisting of a network of relationships and the accumulated capital (economic, cultural, social, and symbolic) of those positions to which the agent is connected. It means membership in a group offering recognition (Bourdieu, 1986). Bourdieu's concept of social capital is conceived as a resource in social struggles and therefore differs from concepts underlining more collective and universal values such as the trust to which Robert Putnam refers (Siisiäinen 2000). Networks as mutual recognition equip agents not with the mutual trust of the network, but with a potential for field-specific resources (economic, cultural, symbolic and social) that can be mobilized by agents for their actions. Social capital cannot be mutually accumulated through the sum of interactions, but instead through long-term cultural, symbolic or economic investment by agents (Bourdieu, 1986.)

Bourdieu introduces *symbolic capital* as a specific form, which can be any of the other three forms. Symbolic capital is 'denied capital, recognized as legitimate and misrecognized as capital' (Bourdieu 1990, p. 118). This means that although rights, duties or gifts may appear to be outside self-interest and egoistic calculation, they can be accumulated in symbolic forms of capital - honour and prestige - and then converted e.g. into economic profits in market transactions (Bourdieu, 1990). Symbolic capital exists only in a field (among a group) that has the capacity to play the game in question. It accepts the illusion of its value as self-evident and thus misrecognises its arbitrariness (Bourdieu, 1990).

*Economic capital* in Bourdieu's theory is equivalent to that of economic theory; financial resources. But it is also understood through its relation to other forms of capital. By means of his relational concept of capital, Bourdieu emphasises that the reduction of all capital forms to economic capital (economism) fails to recognise the efficacy of the other capital forms. On the other hand, approaches that reduce all exchanges to communication fail to recognise the 'brutal fact of universal reducibility to economics' (Bourdieu, 1986, p. 54.).

The power attached to agents depends on their possession of capital, which provides them with a competitive advantage (Bourdieu 2005). Capital can therefore be seen as a resource, and, consequently, access to field-specific

---

resources are crucial for agency. It is tempting to treat capital forms - like any other object - as static resources. However, Bourdieu himself warns of treating research objects as given and suggests focusing on the relationality between the properties that characterise them (Bourdieu and Wacquant, 1992).

### **The context of the Finnish care marketization**

Finland applies the Nordic model of the welfare state which is based on the principles of universalism and equality. These refer to the equal access of citizens to social and health care services, regardless of their financial capacity. Equal access is enabled through tax-based financing. So are fees of the elderly residential care adapted according to the individual's financial situation. Tax revenues then compensate the remaining deficit. This principle of distributed responsibility and shared solidarity is the main difference to other welfare models in the EU, such as to the family centred model.

With 'care', this article refers to social services. Social services include child care, elderly care, care of the disabled and intoxicant abusers, as well as home-help services. Nordic social scientists have engaged in a lively discussion of the ongoing change in the Nordic welfare regime and its implications for care workers and clients. Although the Nordic system traditionally relies on public-sector service production, the role of public sector is changing (Anttonen and Häikiö, 2011). Sweden and Finland have been the most active of the Nordic countries in their marketization efforts and have shrunk the role of public sector service production (Anttonen and Häikiö, 2011). However, compared even with Sweden, Finland is a 'latecomer' in the marketization of care and there is little empirical research on the topic (Anttonen and Häikiö, 2011). In this paper, the focus is on the ongoing marketization process in Finland, but since developments in Finland and Sweden are apparently similar, experiences are also used from the latter. Outcomes from Sweden help us to understand the Finnish process and allow to examine it now, as it is unfolding, and not post hoc.

Marketization is a process where public sector services are increasingly produced by the private sector. Marketization can be conceptualised according to the involvement of both competition and private sector actors in service production (Anttonen and Meagher, 2013). In the care sector, marketization in the form of outsourcing is called first-wave marketization (Sundin and Tillmar, 2010). It has existed in both Sweden and Finland for quite some time, but since the 1990s, private sector care provision has grown and continually replaced public-sector care. Outsourcing is the most common way to contract out elder-care services to the private sector, but it is increasingly

regarded as time-consuming (Erlandsson et al., 2013). The customer choice models that local authorities adopt nowadays can be seen as 'second wave marketization' (Erlandsson et al., 2013). The entrepreneurship perspective is seldom encountered in Nordic care marketization research. The care field represents a case where newcomers to the field, despite public criticism and specific concrete attempts to favour micro entrepreneurs, are successful.

## **METHODOLOGY AND DATA**

---

This paper draws from the most recent research on Nordic, and especially on Finnish care marketization and care sector entrepreneurship, which are used as secondary data. The publications of research project results (Norma Care, 2013, Anttonen et al., 2009, NordForsk research report, 2013), international articles (Anttonen and Häikiö, 2011, Bourne, 2010, Kovalainen and Österberg, 2000, Kovalainen and Österberg-Högstedt, 2011, Sundin and Tillmar, 2008, Sundin and Tillmar, 2010; Sundin, 2011; Tillmar, 2009; Åkerblad 2009) and other publications (Koskiaho, 2008; Österberg-Högstedt, 2009) offer rich insights into the topic. The article highlights some successful actions of newcomers to the field that are given much attention in this literature. They offer a window to the care sector field. The literature is complemented with government reports on the care sector (KTM, 2005, STM, 2008, TEM, 2010, 2012).

The purpose here is not to describe the field as a whole, nor identify all participants or explain their contributions to care marketization in full detail. Instead, institutional change is tracked as a gradual process and emerging practices are followed even before they are institutionalised. In the literature, researchers report and document moving from the first wave marketization (outsourcing) to the second wave (customer choice). Out of this literature, the analysis begins by identifying the buying and selling practices in the outsourcing model and describes how newcomers challenge them, and then moves towards the customer choice. By means of Bourdieu's concept of capital, some forms of capital are interpreted that seem relevant to the field. Capital enables to grasp the role of power within IE. Bourdieu's concepts are criticised for their fuzziness (DiMaggio, 1979; Mouzelis, 2004). Indeed, it is a risky business to interpret clear-cut concepts out of the complex world. Since it is not the aim here to map the care field as a whole, however, but to develop concepts to understand how challenging the field can take place, and to scrutinise the role of power within it, making some simplifications and drawing examples are justified.

Individual agents sense their opportunities for taking action. But mere acts, arguments, services, products etc., can make opportunities for taking

action, or position-takings, as Emirbayer and Johnson (2009) call them, visible. The article describes some of these position-takings that in the literature are considered new and threatening the the Nordic welfare model. Their challenging character is then analyzed with the help of the interpreted capital forms and their relations: previous analyses of marketization are read through the Bourdieusian categories. The literature documents how experiences from the outsourcing model have led to the incorporation of some activities into field practices, whereas at the same time a totally new package of practices has been introduced, the so-called customer choice model.

## **CAPITAL FORMS IN THE OUTSOURCING MODEL**

### **The value of embodied cultural capital**

In Finland, the public sector buys most of the basic services offered by care providers (Kovalainen and Österberg-Högstedt, 2011). The Finnish outsourcing model is therefore characterised by one buyer and several sellers. The public, third and private sectors all produce services and the public sector takes a positive or reasonable attitude towards private production (Kovalainen and Österberg-Högstedt, 2011). There are several ways to buy public services, ranging from an open procedure, where all interested suppliers may submit a tender to the contracting authority, to a framework agreement. The terms of contract for a given period are agreed upon by the counterparts (Karsio and Anttonen, 2013). Local authorities combine price and quality criteria when they buy care. The quality criteria are merely recommended and not prescribed by the relevant legislation (Karsio and Anttonen, 2013). Instead, local authorities define their own quality criteria. It is argued that outsourcing in the form of competitive tendering contributes to efficiency and effectiveness and combats the public-sector financial crisis (Kovalainen and Österberg-Högstedt, 2000).

An ethical conflict between care professionalism and profit maximising has been observed (Österberg-Högstedt, 2009). Care entrepreneurship is even framed by the question of whether care ethics is in any way compatible with profit maximising (Österberg-Högstedt, 2009). It is conceived as compromising with caring (Åkerblad, 2008). There are numerous different interpretations regarding the Nordic welfare state and its duty to cater to either the needs of the market economy or to those of the citizens (Autto, 2012). Advocates of universalism underscore that care is the right of all citizens irrespective of their class, gender or ethnicity (Kröger et al. 2003, after Anttonen & Häikiö, 2011, p.16) and discuss adequate methods for

combating various social problems (Koskiaho, 2008). Anttonen (2009) argues that the need of citizens for more and better care and public financing of such care can be regarded as the point of departure of modern Finnish social policy. Citizens are entitled to care, and society is duty-bound to help them with their problems.

Although there are differences between individual services, official reports document that non-profit care provision and low-profit, small-scale entrepreneurship are the most dominant forms of private sector service provided in Finland (TEM, 2010). This conception of legitimate care provision seems to downplay any economic reason in the form of profits. Szebehely and Meagher (2013) point, however, that the Nordic tax-funded care provision is based on collective resources that shall be used effectively. Österberg-Högstedt (2009) notes that the sector in general has not been encouraged to maximise profit. Non-profit organisations do without profit, as the term suggests. Even the salaries in the caring sector are lower than in many other professions with the same level of requirements (Anttonen and Zechner, 2009). It is argued here that this rests on a very one-sided economic understanding of the care field as a cost for the rest of society. This may sound more radical than it actually is. For quite some time, actually, feminist researchers criticise the exclusion of care of economic production theories and its treatment in fiscal rules (Biesecker and Hofmeister, 2010; Himmelweit and Perrons, 2006; Madörin, 2010; Perrons, 2010). In Finland, as elsewhere, fiscal calculating practices categorise care unilaterally as a cost both in the national gross domestic product (GDP) and municipal budgets. Care produces benefits for other productive sectors, however (Himmelweit and Perrons, 2006). These benefits, as well as the contribution of care to welfare in general, are of course difficult to measure quantitatively, but so are their costs, too (Koskiaho, 2008).

Hence, care as a cost is not an independent field level definition. It is even contested by many field participants. But it is clearly a conception, which makes cost-effectiveness within care production desirable, although cost savings in care cannot be verified. Cost savings are therefore promises, which points to their symbolic character. Contribution to cost savings is a form of symbolic capital. It is a 'credit and a kind of advance' (Bourdieu, 1990, p. 120). It is denied and unrecognised capital in the sense that its self-interest remains unrecognised; it appears to be objective (Bourdieu, 1990). It is actually arbitrary and depends on the game and belief in it. Care provision should be as cheap as possible. *Symbolic capital* can thus be interpreted to be constructed around the reputation of a cost-saving and selfless care provider. What is interesting here though, is that this particular capital form is not independent from other fields.

Several forms of *cultural capital* in the care field can also be interpreted: care professionalism, a non-profit, service-related social orientation, and the knowledge related to large-scale service production. Although these forms are connected to specific agents in the field, such as care professionalism to female entrepreneurs (Kovalainen and Österberg-Högstedt, 2011; Österberg-Högstedt, 2009), or social orientation to non-profit organisations (Karsio and Anttonen, 2013), positions combining some or all of these forms coexist, for example in large-scale, socially oriented care provision (see large scale non-profit, e.g. Karsio and Anttonen, 2013) and in socially oriented entrepreneurship (see e.g. Sundin and Tillmar, 2008; Tillmar, 2009). It is worth noting that the care professionalism of Finnish entrepreneurs is strongly emphasised in its *embodied* form; education and work experience is conceived to construct entrepreneurial identity (Kovalainen and Österberg-Högstedt, 2011; Österberg-Högstedt, 2009). Care entrepreneurship is strongly based on professionalism (Österberg-Högstedt, 2009) and physical caring duties (Åkerblad, 2008). Since local authorities are the sole buyer of care, *social capital* from the perspective of entrepreneurs concentrates on good relations with the local authority. Outsourcing is strongly regulated by the local authority, which can determine the price and quality criteria. Relations with customers appear important in cases where customers pay for the services themselves. In the outsourcing model this is mainly restricted to complementary services of minor monetary importance.

The importance of *economic capital* is relevant for financing investments, for example buildings and special equipment. Starting a nursing home requires large amounts of capital, whereas home help services can be carried out with less investment. The amount of economic capital determines the size of the care unit. However, the role of economic capital is concealed. Non-profit care providers enjoy special conditions for selling care and these have economic reasons and effects. There are special conditions that relate to financial grants by foundations<sup>2</sup> (Karsio and Anttonen, 2013) and result in the privileging of non-profit care provision by local authorities. Privileging is economically motivated by the low prices enabled by financial grants to non-profit organisations (Kröger, 2009).

### **Growing value of economic capital**

Recently, large profit-oriented companies have entered the Finnish care market, questioned the conflict between care professionalism and profit orientation, and won competitive tendering. Especially within elderly care, the price actions of profit-oriented newcomer companies in Finland have forced

<sup>2</sup> In 2001, these special conditions and the rights to foundation grants were abolished.

third sector companies to follow and lower their prices (Karsio and Anttonen, 2013). In Sweden, there has even been a zero-cost bid by an international profit-oriented care company (Sundin and Tillmar, 2010). Low-price companies are typically newcomers in the care field. Within the care sector, newcomers are not known or trusted to the same extent as field insiders (Österberg-Högstedt, 2009). Despite lack of trust, why are they successful? Koskiahio (2008) points to cuts in governmental support to local authorities that reduce their financial resources. At the same time, abolition of foundation grants to non-profit care providers ended the special relationship between them and local authorities. Such regulatory changes within institutional theory are perceived as external 'jolts' that grant access to newcomers and raise awareness of alternative logics (Greenwood and Suddeby, 2006), whereas endogenous change is related to actions by institutional entrepreneurship (DiMaggio, 1988). Undoubtedly, negotiations at the societal level increasingly emphasise cost-savings. Hence, compensating for the lack of a selfless reputation with a *promised* contribution to cost-savings becomes possible or at least easier. As a result, newcomers gain access to a position that combines profit-orientation with cost efficiency.

Newcomers are outsiders to the field. They, therefore, perform a contextual break, which is seen offering possibilities to do things differently than before (e.g. Mutch 2007). It is highlighted here, however, that what we observe here is a conversion of one form of capital into another (Bourdieu, 1986). In concrete, the case demonstrates how economic capital enables acquiring symbolic capital. Bourdieu (1986) points to the convertibility of capital as the basis for strategies for occupying positions in the field. In the care field, conversion opportunities can be revealed through the buying practices of the local authority. The previous chapter described how non-profit organisations enjoy access to foundation grants that enable them to provide care at low prices. Low prices motivate local authorities to construct special conditions for non-profits and relations with them. Non-profits therefore gain a reputation for cost-effectiveness and earn the trust of local authorities. First, this illustrates how social capital can be legitimately converted into symbolic capital and second, that there is an obvious economic element in this conversion practice. Newcomer activities then show that symbolic capital (concerning a reputation for cost saving), which was earlier accessible only with foundation grants or unpaid labour input of entrepreneurs, can also be converted with the funds of private companies.

Successes achieved with low and zero-cost bids indeed *unveil* the convertibility of economic capital into other forms within the existing power structure. Especially converting economic capital into symbolic becomes visible and appears shocking. Of course, adequate economic resources are

needed for such a position-taking act. This makes clear that conversions are restricted possibilities. These conversions are conceptualised as opportunities. It is argued that they emerge within the field practices. Power therefore steers opportunity creation, and their exploitation both by the newcomers and insiders.

The profit-oriented actions of newcomers have come to dominate the Finnish care field - even to the extent that non-profits are now obliged to incorporate their activities. Documents of the Ministry of Employment and Economic Affairs report that large companies buy out small providers and thus contribute to centralisation of the sector (TEM, 2012). Public discussion around poor service quality is lively. At the same time, customer choice practices are being introduced in the field. Both in Finland and Sweden, they are expected to induce quality competition and innovation (Erlandsson et al., 2013; STM, 2008). We will next turn to the second wave marketization practices.

### **GROWING EXCHANGEABILITY OF CAPITAL IN CUSTOMER CHOICE**

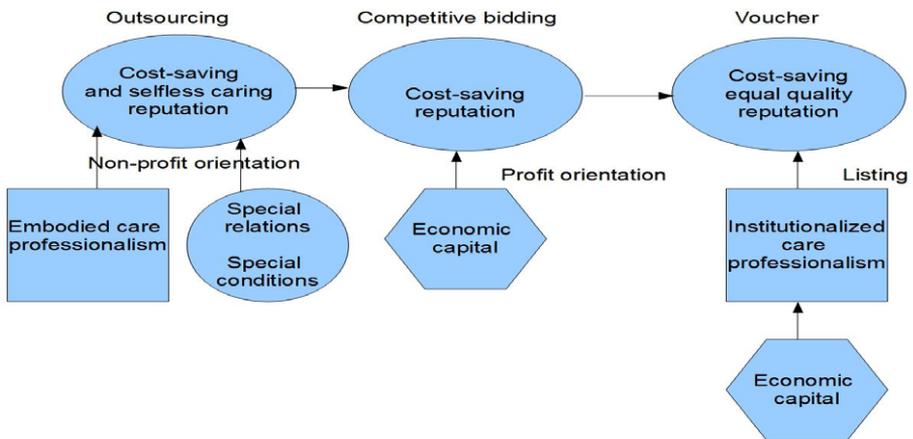
Studying institutional change solely through successful entrepreneurial activities bears the risk of neglecting numerous factors contributing to the process. Delmar (2005) for example, notes that concentrating on successful activities leads to a research bias which neglects failures and makes it impossible to say which factors actually contribute to the success. He suggests studying processes *before* there are clear, identified outcomes. The customer choice model offers the possibility to explore an ongoing institutional change process. It questions outsourcing practices and induces development that in Finland is perceived as radical. The customer choice model is based on the use of vouchers. In 2007, the Finnish Ministry of Social Affairs and Health appointed a working group to discuss the use of vouchers in developing the care sector. It issued an official memorandum suggesting amendments to the law (STM, 2008). The working group comprises experts in care provision and care organisation and includes representatives of the public sector, local-authorities and the private sector. All in all, vouchers are used to enhance the market orientation of the care sector. They are also used to increase diversity among care providers and to encourage entrepreneurship in the care sector (STM, 2008). The customer choice model rests on the idea of free choice among customers and emphasises competition among producers. These are clear market practices. The buying and selling of care services is coordinated through a listing procedure. Local authorities include care suppliers in a list of voucher providers from which individuals choose a care provider (Anttonen and Häikiö, 2011; Sundin and Tillmar, 2010). Instead of paying directly for the services to the care provider as in the outsourcing model, the local authority gives customers a voucher which they in turn use to pay for the services. The local authority determines the value of the voucher, assesses both the

quality of the provider's service and the individual's care needs (Anttonen and Häikiö, 2011) and informs customers of approved care providers (Sundin and Tillmar, 2010). The list also compares and evaluates providers, their prices and the quality of their services according to pre-set criteria (STM, 2008). Only providers who meet these criteria are approved. The criteria are not legally binding but are set by each local authority itself. Each *service* is certified and accredited for the provider *organization* separately (Sundin and Tillmar, 2010). In the official memorandum, customer choice practices are officially recommended for use in all approved services for two reasons; first, they are said to enhance competition and hence cost efficiency and innovativeness and second, they allow individuals to choose their service providers (STM, 2008). In Finland, the purchase of care services with vouchers is the only form of free choice in social and health services (Karsio and Anttonen, 2013).

When compared with outsourcing, voucher implies some changes in the capital relations. One of the changes concerns the embodied form of care knowledge, which concerns employees alone in the customer choice model. Owner-managers of caring companies are not expected to have embodied care knowledge. Instead, care knowledge in its *institutionalised* form becomes stronger as a legitimate form of cultural capital. This strengthens its exchangeable character. Care knowledge can be acquired by employing care givers. The educational backgrounds of the business owners and managers may vary. This is something Everett (2002) calls devaluation of a capital form, in this case the care education embodied by entrepreneurs. It illustrates a change between relative positions (Bourdieu, 2005). The position based on embodied care professionalism loses its position of dominance. In addition to this restricted conception of care knowledge, new forms of cultural capital can be interpreted. Separate listings and accreditation for each *service* emphasise the growing relevance of management and administrative knowledge (Sundin and Tillmar, 2010). Selling practices require totally new areas of expertise such as marketing. These developments are indicative of the changing identity of the Finnish care business owners (Österberg-Högstedt, 2009). Devaluation of the embodied form of care knowledge partly explains the observed disappearance of the logics of care in care provision in Sweden (e.g. Sundin and Tillmar, 2010). It is characteristic of the customer choice model that economic capital offers legitimate access especially to cultural capital. It enables position-taking based on economic capital; we observe conversion opportunities between economic and cultural capital.

Even though marketization seems to have attracted private sector care providers, especially to residential care (Karsio and Anttonen, 2013), voucher practices have still not been widely adopted. In Finland, vouchers are mainly used for child care, home help (Anttonen and Häikiö, 2011) and cleaning services (Karsio and Anttonen, 2013). Moreover, experiences

from Sweden show that despite amendments to the enabling legislation, a voucher continues to be applied mainly in home-help or companion services (Erlandsson et al., 2013). According to Nemlander and Sjöholm (2012), some local authorities plan to adopt vouchers in residential care, the proportion of which can be expected to rise. However, the increase in voucher use for example in Helsinki, the largest local authority in Finland, is expected to be moderate. Since customers are required to pay the difference between the true cost of the care and the value of their voucher, use of the system is expected to remain limited to citizens with sufficient financial resources of their own (e.g. Peiponen, 2009).



**Figure 1.** Marketization as a gradual change, illustrated as changes in symbolic, cultural, social and economic capital relations

## CONCLUSION

This article highlights and analyses newcomer actions that contribute to institutional change within the Finnish care sector. This article studies their challenging aspect with the help of Bourdieu's concept of capital. Newcomer actions are approaches to gain a position in the field. The article demonstrates that before newcomer acts took place, dominating positions in the field consisted of certain forms of cultural and symbolic capital which neglected profits. Instead, the newcomer price dumping targets to larger market shares and so questions the non-profit character of the care production practices. New profit-oriented actors access the field, and price dumping gets increasingly practised. Newcomer actions therefore qualify as a form of institutional entrepreneurship. It is argued here, however, that price dumping actually

exposes how a better position, or a position in the first place, can be acquired through legitimate conversion of a resource into another. This is because even though the non-profit orientation throughout the care production seems to downplay monetary values, it is in fact related to cost effectiveness. Price limit was namely practised in the field already before the newcomers. The public foundation grants for non-profit producers lowered the price level and so the tax-based public spending on care on the community level. There is indeed a recognised monetary motivation for the community to buy non-profit care, since care is categorised as a cost at the municipality budgeting, as it is in the calculation of national GDP, as well. This suggests symbolic capital is not solely a field intern construction, but can be related to macro conceptions, as well. Macro level conceptions should therefore not be considered as an external jolt, but as a practice (of calculation, speech) that relates micro and macro levels.

Now, a reputation as a cost effective care provider can be acquired with profit orientation and economic capital. Within the customer choice, care professionalism will be acquired through hiring care professional work force. Both are examples that demonstrate how exploiting an opportunity and gaining a better position require certain forms of capital, and is therefore restricted to certain positions, only. Obviously, a position with economic capital is in these examples explicitly acknowledged as such. Contextual break simply means newcomers have divergent capital portfolio from the field insiders, in this case above all: money. This means first, that newcomers do not necessarily need large amounts of field specific abilities acquired during a long period of time. Acquiring cultural capital in order to fit in (De Clercq and Voronov, 2009a) is possible through conversion opportunities. Newcomers can gain a powerful position through the conversion of one to another form of capital, an act which fits into the field. Second, this points that newcomers' acts which are perceived as challenging and inducing institutional change, may in fact represent acts of *legitimate challenging*, a challenging along the power relations. This is when the newcomer portfolio fits with the field, i.e. offers conversion opportunities. Conversion opportunities are relevant for the theory of institutional entrepreneurship. So, how much fitting in is allowed, how much standing out is required for a newcomer, in order to be qualified as entrepreneurial and inducing institutional change? This article argues that the two cannot be necessarily separated. Newcomers who introduce the challenging action of profit-oriented price dumping, can in fact exploit opportunities for legitimate position-takings.

Institutional change is argued to be about transforming the field structure (e.g. De Clercq and Voronov, 2009a). Within the field level negotiations, acts that radically differ from the present practices have the best chances to result in a change (Lounsbury and Crumley, 2007). Based on the evidence from the care field it is noted here that the definition of the 'field' should receive particular notice, and take into account the relations to other fields and macro level conceptions. It is pointed here to the macro level conceptions

and their role on what is conceived as radical within the field. Neglecting the macro conception of care makes increasing cost effectiveness indeed look like radical transformation of the care field. But whether price dumping is a radical act depends on its relation to the field as whole (Munir and Phillips, 2005). Acknowledging the enduring societal practice to treat care as a cost, makes the emerging practice of price dumping appear just as a reconfiguration of the field. The zeitgeist and time do affect the process (Buhr, 2012; Czarniawska, 2009), but it does not necessarily affect a change but can create 'reworkings' and 'new arrangements' of care, to put it in Adkins' (2004) words. In the care sector these seem to redefine the field as a re-productive sector and to continue keeping it separate from the productive economy. Research on IE already acknowledges field intern relations between individuals and organisations (Battilana, 2006). Future research on IE could move towards designing a relational analysis which also takes into account relations *between* sectors, and the relations to macro level conceptions. This would have practical consequences on the care sector, as well. It would make visible its contributions to other sectors.

### Acknowledgements

I gratefully acknowledge the support and generosity of Jenny and Antti Wihuri Foundation.

### References

- Adkins, L. (2004). Freedom or habit of gender? *The Sociological Review*, 52(2), 191–210.
- Åkerblad, L. (2009). Hoivayrittäjän arki: lämpöä, puhtautta ja johtamista. *Janus* 17(4), 313-328.
- Anttonen, A. (2009). Hoivan yhteiskunnallistuminen ja politisoituminen. In: A. Anttonen, H. Valokivi, M. Zechner (Eds.), *Hoiva, tutkimus, politiikka ja arki* (pp. 54-98). Tampere: Vastapaino.
- Anttonen, A. & Häikiö, L. (2011). Care 'going market': Finnish elderly-care policies in transition'. *Nordic Journal of Social Research*, 1-21.
- Anttonen A. & Meagher G. (2013). Mapping marketization: concepts and goals. In: G. Meagher, M. Szebehely (Eds.), *Marketization in Nordic eldercare – a research report on legislation, oversight, extent and consequences* (pp. 13-21). Stockholm: Stockholm University.
- Autto, J. (2012). *Päivähoitopolitiikka kamppailuna hyvinvointivaltiota*. (PhD dissertation). Rovaniemi: University of Lapland.
- Battilana, J. (2006). Agency and institutions: The enabling role of individual's social position. *Organization* 13(5), 653-676.
- Biesecker, A. & Hofmeister, S. (2010). Im Fokus: Das Re(Produktive). Die Neubestimmung des Ökonomischen mithilfe der Kategorie Re(Produktivität). In: C. Bauhardt, G. Caglar (eds.), *Gender and Economics* (pp. 51-80). Wiesbaden: VS Verlag.

- Bourdieu, P. (1972). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. (1986). The forms of capital. In: Richardsson, JE (Ed.), *Handbook of theory of research for the sociology of education* (pp. 241-258). New York: Greenwood Press.
- Bourdieu, P. (2002). Social space and symbolic power. In: Haugaard, M (Ed.), *Power: A reader* (pp. 14-25). Manchester: Manchester University Press.
- Brush, C., de Bruin, A. & Welter, F. (2009). A gender aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship*, 1(1), 8-24.
- Buhr, K. (2012). The inclusion of aviation in the EU emissions trading scheme: Temporal conditions for institutional entrepreneurship. *Organization Studies*, 33(11), 1565-1587.
- Chiasson, M. & Saunders, C. (2005). Reconciling diverse approaches to opportunity research using the structuration theory. *Journal of Business Venturing*, 20, 747-767.
- Czarniawska, B. (2009). Emerging institutions: Pyramids or anthills? *Organization Studies*, 30(4), 423-441.
- Czarniawska, B. & Wolff, W. (1998). Constructing new identities in established organization fields: Young universities in old Europe. *International Studies of Management and Organization*, 28(3), 32-56.
- De Clerq, D. & Voronov, M. (2009a). Toward a practice perspective of entrepreneurship, entrepreneurial legitimacy as habitus. *International Small Business Journal*, 27, 395-419.
- De Clerq, D., & Voronov, M. (2009b). The role of domination in newcomers' legitimacy as entrepreneurs. *Organization*, 16(6), 799-827.
- De Clerq, D. & Voronov, M. (2009c). The role of cultural and symbolic capital in entrepreneurs' ability to meet expectations about conformity and innovation. *Journal of Small Business Management*, 47(3), 398-420.
- Delmar F. (2005). The entrepreneurial process: emergence and evolution of new firms in the knowledge-intensive economy. In: A. Fayolle, P. Kyrö & J. Ulijin (Eds.), *Entrepreneurship research in Europe, outcomes and perspectives* (pp. 55-79). Cheltenham: Edgar Elgar Publishing.
- DiMaggio, P. (1988). Interest and agency in institutional theory. In: L. Zucker (ed.), *Institutional patterns and organizations: Culture and environment* (pp. 3-21). Cambridge Mass.: Ballinger Publishing.
- DiMaggio, P. (1979). Review essay: On Pierre Bourdieu. *American Journal of Sociology* 6, 1460-1474.
- Emirbayer, M. & Johnson, V. (2008). Bourdieu and organizational analysis. *Theory and Society*, 37, 1-44.
- Erlandsson, S., Storm, P., Stranz, A., Szebehely, M. & Trydegård, G-B (2013). 'Marketising trends in Swedish eldercare: competition, choice and calls for stricter regulation'. In: G. Meagher, M. Szebehely (eds.), *Marketization in Nordic eldercare – a research report on legislation, oversight, extent and consequences* (pp. 23-75). Stockholm: Stockholm University.

- Feldman, M. & Orlikowski, W. (2011). Theorizing practice and practicing theory. *Organizational Science*, 22(5), 1240-1253.
- Fligstein, N. (1997). Social skill and institutional theory, *American Behavioral Scientist*. 40(4), 397-405.
- Fligstein, N. (2001). Social skills and the theory of fields. *Sociological Theory*, 19(2), 105-125.
- Fligstein, N. (2008). Fields, power, and social skill: A critical analysis of the new institutionalisms, *International Public Management Review*, 9(1), 227-253.
- Fligstein, N. & Mara-Drita, I. (1996). How to make a market: Reflections on the attempt to create a single market in the European Union. *American Journal of Sociology*, 102(1), 1-33.
- Greenwood, R. & Suddaby, R. (2006). Institutional entrepreneurship in mature fields: the big five accounting firms. *Academy of Management Journal*, 49(1), 27-48.
- Himmelweit, S. & Perrons, D. (2006). *Gender and fiscal rules: How can we afford the rising cost of care?* Retrieved from [http://www.levyinstitute.org/pubs/CP/May2006\\_symposium\\_papers/paper\\_Himmelweit\\_Perrons.pdf](http://www.levyinstitute.org/pubs/CP/May2006_symposium_papers/paper_Himmelweit_Perrons.pdf)
- Karsio, O. & Anttonen, A. (2013). Marketization of eldercare in Finland: legal frames, outsourcing practices and the rapid growth of for-profit services. In: G. Meagher, M. Szebehely (Eds.), *Marketization in Nordic eldercare – a research report on legislation, oversight, extent and consequences* (pp. 85-126). Stockholm: Stockholm University.
- Koskiahio, B. (2008). *Hyvinvointipalvelujen tavaratalossa*. Tampere: Vastapaino.
- Kovalainen, A. & Österberg-Högstedt, J. (2000). Sosiaalinen pääoma, luottamus ja julkisen sektorin restrukturaatio. In: K. Ilmonen (Ed.), *Sosiaalinen pääoma ja luottamus* (pp. 69-92). Jyväskylä: SoPhi University of Jyväskylä.
- Kovalainen, A. & Österberg-Högstedt, J. (2011). *Entrepreneurship within social and health care – a question of identity, gender and profession*. Paper presented at the International Council for Small Business (ICSB), Stockholm, Sweden.
- KTM Ministry for Economic Affairs and Trade, (2005). *Naisyrittäjyys* (Female entrepreneurship) publication 11/2005. Retrieved from [http://www.yrittajanaiset.fi/doc/Naisyrittajyysjulkaisu\\_2005.pdf](http://www.yrittajanaiset.fi/doc/Naisyrittajyysjulkaisu_2005.pdf)
- Lawrence, T. & Phillips N. (2004). From Moby Dick to Free Willy: Macro-cultural discourse and institutional entrepreneurship in emerging institutional fields. *Organization*, 11(5), 689-711.
- Leca, B., Battilana, J. & Boxenbaum, E. (2008). *Agency and institutions: A review of institutional entrepreneurship*. Harvard Working Paper 08–096. Retrieved from <http://egateg.usaidallnet.gov/sites/default/files/Review%20of%20Institutional%20Entrepreneurship.pdf>

- Madörin, M. (2010). Care Ökonomie – eine Herausforderung für die Wirtschaftswissenschaften. In: C. Bauhardt, G. Caglar, (Eds.), *Gender and Economics* (pp. 81-104). Wiesbaden: VS Verlag.
- Maguire, S. & Hardy, C. (2009). Discourse and deinstitutionalization: The decline of DDT. *Academy of Management Journal*, 52(1), 148 - 178.
- Maguire, S., Hardy, C. & Lawrence, T. (2004). Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *Academy of Management Journal*, 47(5), 657-679.
- Mohr, J. & Neely, B. (2009). Modeling Foucault: Dualities of power in institutional fields. *Volume Research in the Sociology of Organizations*, 27, 203 – 255.
- Mouzelis, N. (1989). Restructuring structuration theory. *Sociological Review*, 37(4), 613-635.
- Munir, K. & Phillips, N. (2005). The birth of the Kodak moment: Institutional entrepreneurship and the adoption of new technologies. *Organization Studies*, 26(11), 1665-1687.
- Mutch, A. (2007). Reflexivity and the institutional entrepreneur: A historical exploration. *Organization Studies*, 28(07), 1123–1140.
- Österberg-Högstedt, J. (2009). *Yrittäjänä ammatissaan sosiaali- ja terveysalalla – yrittäjyyden muotoutuminen kuntatoimijoiden ja yrittäjien näkökulmasta*. PhD dissertation, Turku: Turku School of Economics.
- Perrons, D. (2010). Gender, work and 'market' values. *Renewal* 18(1-2), 34-42.
- Phillips, N., Lawrence, T. & Hardy, C. (2000). Inter-organizational collaboration and the dynamics of institutional fields. *Journal of Management Studies*, 37(1), 23-44.
- Powell, W. (2007). The new institutionalism, *The international encyclopedia of organization studies*. Sage Publishers. (preprint: <http://www.stanford.edu/group/song/papers/NewInstitutionalism.pdf>)
- Scott, W (2001). *Institutions and organizations*. Newbury Park, CA: Sage Publications.
- Seo, M. & Creed, D. (2002). Institutional contradictions, praxis and institutional change: A dialectical perspective. *Academy of Management Review*, 27(2), 222-247.
- Siisiäinen, M. (2000). *Two concepts of social capital: Bourdieu vs. Putnam*. Paper presented in ISTR Fourth International Conference "The Third Sector: For What and for Whom?" Trinity College, Dublin, Ireland July 5-8, 2000.
- STM Ministry of social affairs and health (2008). *Palvelusetelin käyttöalan laajentaminen*. Palvelusetelityöryhmän muistio. Helsinki: Sosiaali- ja terveysministeriön selvityksiä 2008:32.
- Sundin, E. & Tillmar, M. (2008). A nurse and a civil servant changing institutions: entrepreneurial processes in different public sector organizations, *Scandinavian Journal of Management*, 24, 113-124.

- Sundin, E. & Tillmar, M. (2010). Masculinisation of the public sector Local-level studies of public sector outsourcing in elder care. *International Journal of Gender and Entrepreneurship*, 2(1), 49-67.
- Sundin, E. (2011). Entrepreneurship and social and community care. *Journal of Enterprising Communities*, 5(3), 212-222.
- Szebehely, M. & Meagher G. (2013). Four Nordic countries – four responses to the international trend of marketization. In G. Meagher, M. Szebehely (Eds.), *Marketization in Nordic eldercare – a research report on legislation, oversight, extent and consequences* (pp. 241-284). Stockholm: Stockholm University.
- TEM Ministry of Employment and Economy (2012). *Sosiaalipalvelut*. TEM toimialaraportit, 5/2012. Retrieved from [http://www.temtoimialapalvelu.fi/files/1638/Sosiaalipalvelut2012\\_web.pdf](http://www.temtoimialapalvelu.fi/files/1638/Sosiaalipalvelut2012_web.pdf)
- TEM Ministry of Employment and Economy (2010). *Sosiaalipalvelut*. TEM toimialaraportit, 11/2010. Retrieved from [http://www.ely-keskus.fi/fi/tiedotepalvelu/2010/Documents/Etel%C3%A4Savon%20ELY/Sosiaalipalvelut\\_2010web.pdf](http://www.ely-keskus.fi/fi/tiedotepalvelu/2010/Documents/Etel%C3%A4Savon%20ELY/Sosiaalipalvelut_2010web.pdf)
- Tillmar, M. (2009). Societal entrepreneurs in the health sector: crossing the frontiers. *Social Enterprise Journal*, 5(3), 282-298.
- Welter, F. (2011). Contextualizing entrepreneurship – Conceptual challenges and ways forward. *Entrepreneurship Theory and Practice*, 35(1), 165-184.
- Viale, T. (2008). *Unpacking the “institutional portfolio”, Theoretical elements for an analysis of institutional change through objectification of resources and habitus*. Organization and Human Resources Department. HEC School of Management, Paris, France. Retrieved from [www.hec.fr/.../5035/.../CR\\_906\\_ThierryViale.pdf](http://www.hec.fr/.../5035/.../CR_906_ThierryViale.pdf)

### **Abstrakt (in Polish)**

W tym artykule, działania w ramach urynkowienia opieki są rozumiane jako przedsiębiorczość instytucjonalna, która podważa obecne praktyki w ramach zapewniania usług opiekuńczych. Opisane są tu rozwiązania w zakresie sprzedaży i zakupu opieki, oraz poddany analizie został podstawowy układ sił w dwóch modelach urynkowienia opieki: outsourcing i tzw. "druga fala", czyli model wyboru konsumenta, występujący w Finlandii. Czerpiąc z koncepcji Bourdieu dotyczących kapitału kulturowego, symbolicznego, społecznego i gospodarczego niniejsza praca podkreśla znaczenie konwersji kapitału, w celu zrozumienia przedsiębiorczości instytucjonalnej. Twierdzi się, że pozycje i szanse osiągnięcia silniejszej pozycji nie są wyłącznie domeną koncepcji wewnętrznych, ale mogą być związane z koncepcjami na poziomie ogólnym. Wykorzystanie takich możliwości kwestionuje samą, stanowiącą wyzwanie, koncepcję przedsiębiorczości instytucjonalnej. W zamian, sugeruje się, że przedsiębiorczość instytucjonalna może być również postrzegana jako uzasadnione wyzwanie co wskazuje, że „trudność” i „zgodność” niekoniecznie muszą być rozdzielone.

**Słowa kluczowe:** Bourdieu, urynkowienie opieki, przedsiębiorczość instytucjonalna, możliwości.

### **Biographical note**

**Petra Merenheimo** studied business administration at the Goethe University in Frankfurt am Main, Germany. She has worked within female entrepreneurship in Germany and Finland, and currently writes her PhD thesis on entrepreneurship within the care services sector, the University of Lapland, Finland.

---

# Entrepreneurship Processes and Small Farms Achievements: Empirical Analysis of Linkage

*Temidayo Gabriel Apata<sup>1</sup>*

---

## **Abstract**

*Entrepreneurship process has been argued as opportunity-driven, creative, and resource-efficient, that could influence income generation of small farmers that adopted entrepreneurial skills and innovation into their farming operations. This study examines entrepreneurship process strategies employed to income increase by small farmers, evidence from southwest of Nigeria. The sampling procedures entail three stages of samples selection of 240 farmers but only 200 data was useful. Descriptive statistical and inferential statistics were used to analyze and describe the data. Respondents' age ranges from 16 to 65 years old, mean age was 36.16 years. The study found out that 5 % of the samples had modest communication skills that aid adoption of effective entrepreneurial processes and about 83% have a strong belief in one's self to succeed. Successful farmers had multiple sources of related income generation business ventures. Targeting the entrepreneurs for support could make them even more effective.*

**Keywords:** *agricultural entrepreneurship, entrepreneurial skills, effective management, small farms, entrepreneurial learning identity.*

---

## **INTRODUCTION**

Entrepreneurship has been argued as a multifaceted notion, which has been defined in different ways by various investigators. It is a complex and holistic "fit and balance" of several factors (Timmons, 1999). Various investigators have given prominence to different blend of factors, but most would concur with Timmons (1999) and Kodithuwakku and Rosa (2002) that at its fundament, the entrepreneurial process is opportunity-driven, creative and resource-efficient.

Scott *et al.* (1997) argued that entrepreneurship is a "creative process of extracting social and economic value from the environment". The

---

<sup>1</sup> Temidayo Gabriel Apata, Department of Agricultural Economics and Extension, Federal University, Oye-Ekiti, Nigeria. Tel.: +2348060222394. E-mail: dayo.apata@fuoye.edu.ng.

---

entrepreneurship route to success is not just creative, but also opportunity-driven (Pieter *et al*, 2013, Fry, 1993). In his words Bryant (1989) argues that “entrepreneurs are characteristically people who go beyond the limits of resources over which they have direct control’.

Moreover, Bygrave (1994) reasoned that entrepreneurs looked for route of regulatory decisive resources without owning them. Alsos *et al*, 2011 maintained that the key quality of entrepreneurs is their capability to be innovative with limited resources. Allan *et al*. (2012) and Stevenson, (1997) argued that ownership of resources is not a mandatory requirement for entrepreneur to make use of and it is not necessary to provoke its movement or change of application but a process by which individuals pursue opportunities without regard to the resources they currently control. In the light of the above concepts and arguments, the study deduced that an entrepreneur is an individual who is inventive in finding ways that add value to his own wealth, produces influence, and reputation and who is not afraid to take a risk that could advance his belief. It is said that “entrepreneurial process provides an alternative way to efficiently manage resources than just following conventional or standard good management practice” (Pieter *et al*, 2013 and Allan *et al*. 2012).

Thus, an entrepreneur is an individual who is more resourceful in making use of what is available to create opportunities to advance growth. Agriculture is at the heart of the majority of rural households in developing countries like Nigeria. Past studies have indicated that a great mass of people in rural areas earn their livelihood from the land and see it as a way of life, operating mainly on small scale due to limited resources (Oyebola and Ajiboshin, 2013, Raimi and Towobola, 2011, Chu *et al* 2010, Onipede, 2003, Akin and Peter, 2002). It is also argued that these categories of people are efficient in the allocation of resources at their disposal (Fans *et al*, 2003, Babatunde and Qaim, 2010).

A small farm is defined as “operated units in which most labour and enterprise come from farm family, which puts much of its working time into the farm” (Gries and Nande, 2011, Wiggins, 2009, Nick, 2008, Cormia, 1985); The World Bank’s Rural Strategy defines smallholders as those with a low asset base, operating less than 2 hectares of cropland (UNECA, 2009). Also, small farms have been ascribed as “limited resource endowments, relative to other productive activities” (Bozzoli and Bruck, 2009, Cormia, 1985). Review of similar studies showed that a small farm is a subsistence farming operation where the family provides the majority of labour and the farm provides the principal source of income” (Pingali 2010, Nagayets, 2005, Hazell and Haggblade, 1993). From these lines of arguments it can be deduced that small farmers are already entrepreneurs in the sense that they seek out money-making prospects, manage costs of production and marketing, and aspire to

grow their business. Evidence from Africa and Asia revealed that small farms still dominate the country gross domestic product. Thus, the secret of their recorded successes are embedded in the entrepreneurial process adopted at various levels of production (Vik and McElwee, 2011, Discuo, *et al*, 2010).

Literature has shown that there is a positive linkage between small farmers that adopted entrepreneurial skills and innovation into their farming operations and increase income (Tilman *et al*, 2013, David, 2012, Chen and Ravallion, 2010). Evidence abounds in a substantial body of literature linking the value of entrepreneurial approaches and strategies by individual entrepreneurs to business growth (Rijkers and Costa, 2010, Bardassi and Sabarwal, 2009, Parker, 2009, Carter and Ram, 2003). Hypothetically, it can be seen that entrepreneur business growth stems from effective resource management through conventional management practice and fortunate access to resources (Jervell, 2011, Bruck *et al*, 2011, Bennet, 2010, Parker, 2008).

There is, however, a dearth of studies demonstrating the empirical vibrant operations of the entrepreneurial processes to business growth among small farmers. Therefore, this study empirically examined entrepreneurial processes and exploitation of small farms by exploring the subtleties of the entrepreneurial process in an all-inclusive socioeconomic background using both qualitative and quantitative methods of data analysis. This research was driven by the basic issue of why some rural entrepreneurs in Nigeria were much more successful than their fellow rural farmers who do not adopt such strategies. Also, giving the same level of opportunity and resources to rural household, what would be the factor (s) that will define economic success or entrepreneurial success, is it through their socio-economic characteristics and what are the factors that influence this? This study answers this question by looking at adoption of entrepreneurship processes and exploitation of small farms in Nigeria using empirical evidence from rural farming households in Southwest Nigeria.

## METHODOLOGY

---

### Area of study

The area of study is South West Nigeria. There are six major zones in Nigeria of which South West is one of them and it comprises of six states. The states are Lagos, Ogun, Osun, Oyo, Ondo and Ekiti States respectively. Osun and Ondo States were purposively selected for the study because of wide range of entrepreneurs that are springing up every day. In addition, there are visible government support and international organization presence to develop and

encourage entrepreneurship in the two states selected. Ondo State is the only oil-producing state in the zone and enjoys attention from the Federal Government. This state receives on average N450 million monthly (i.e. about 3.6 million US dollars) in addition to monthly subvention. This state is also regarded as the food basket of the zone. Osun State was selected based on the information of United Nation Human Development Reports (UNECA, 2009) as the poorest state in the South West Nigeria and currently enjoys attention both from local, national and international agencies to support growth of small and medium scale businesses.

### **Sampling procedure and data collection**

The study adopted sampling procedure in three stages in which both purposive (non-probability sampling) and simple random sampling techniques (probability sampling) were used to pick the villages/towns that have been economically active for the past five years (NBS, 2013). The first stage of sampling selection entails the choice of Idoani and Ilara towns in Ondo State. Idoani town was strategically picked based on literature reviewed that this town enjoys support from Leventis Foundation, state government micro-agencies and International Fund for Agricultural Development (IFAD). While Ilara town also enjoys State government support couple with IFAD funding. Similarly, in Osun State, Owena and Okuku towns were also strategically picked because these towns are economically active, enjoy support from local, state and federal government. In addition, these towns enjoy Federal Government of Nigeria (FGN) special programme on poverty alleviation; Youth Empowerment Scheme (O-YES), SURE-P (a special intervention by FGN that encourage entrepreneurship development among the youth). Osun state selected towns also enjoy support of funding from United States Agencies for International Development (USAID).

To identify the sampling frame for the study, in the second stage, list of households' heads having access to these supports were extracted from extension section of the Ministry of Agriculture and Rural Development (MARD) of the selected states. Help was also sourced from Agricultural Development Programme (ADP) offices to verify and augment some of the data collected from MARD. While a list of farmers (cassava growers) compiled from these agencies were 2500 from Ondo State and 2350 identified farmers (cassava growers) were also sourced from Osun State. In the final stage of selection, 60 respondents were sampled randomly from each town to get a total of 240 farmers (cassava growers), but only 200 data (80% response rate) were useful for subsequent analysis (Table 1).

**Table 1.** Distribution of sampled respondents in the study area

Cassava Farmer Villages / Towns	Sampling Frame	Sampling Distribution	Final selection of sample (n)
Idoani	1350	60	52
Ilara	1150	60	48
Owena	1025	60	46
Okuku	1325	60	54
<b>Total</b>	<b>4850</b>	<b>240</b>	<b>200</b>

Source: Field Survey (2013).

The data collection for this research were quantitative and qualitative data. Data collection was done through various mechanisms which include interviews schedule, Focus Group Discussions (FGD) and observations. The quantitative data were personal characteristics, socio-economic factors, and situational factors. While qualitative data were based on key informants, extension officials, village leaders, Libraries/librarians, NGO workers and groups of farmers. Observations on the choice of the study area revealed equal opportunity of access to productive resources and services (extension and government support) to all cassava growers.

**METHODS OF DATA ANALYSIS**

The study used descriptive statistics such as means, percentages, frequencies, and standard deviations to analyze the quantitative data, while the qualitative data were used to validate responses gathered from quantitative data. In addition, qualitative data were partly analyzed on spot during data collection to avoid omission and to be able to fill the gaps in the quantitative data collection. The use of Multiple Linear Regression (MLR) analysis was used to examine factors influencing entrepreneurial success/failure among the cassava growers. This was captured by their level of income/asset of the identified respondents. The use of this specialized MLR was adopted by the study of Hair *et al*, 1998 who argued that independent variables are known to predict the single dependent value.

According to Browen and Starr (1983), the regression equation takes the form of

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_{16}X_{16} + u_1 \quad (1)$$

Where:

Y= Dependent variable

X<sub>1-16</sub> = Independent variables

a = intercept

b = the slope of the line

a and b are parameters to be estimated.

$u_1$  = error term (unexplained variables)

### **Estimation procedure**

Due to the nature of the data, Ordinary Least Square (OLS) method was adopted for estimation technique. Other techniques used to reduce measurement errors are in the use of Dublin Watson test to assess multi-co linearity among the explanatory variables to avoid co linearity problem and the use of Best Linear Unbiased Estimation (BLUE) method. Data were coded into SPSS version 17 for analysis.

### **Variables and their definitions**

#### *Dependent variable*

The dependent variable used for this study is the entrepreneurial success/failure of the respondent's outputs in terms of knowledge and it is captured by their assets/income or losses accrued. This is to serve as function of knowledge of farmers on daily good farm management practices and their level of utilization of resources at their disposal. To capture farmers' level of knowledge about effective farming practices the use of 'teacher - made type' test was developed. This method was developed and used in consultation with the concerned ADPs Office, key informants representative and officials of the Ministry of Agriculture. Appropriate questions were developed to collect appropriate responses from the farmers about the selected salient features of their entrepreneur ability. The various items were developed for the knowledge test in respect of operative farming practices and these were given weights as per their prominence.

#### *Independent variables*

For this study, 16 independent variables (see Table 2) were identified and hypothesized to influence the dependent variable. From these 16 variables 10 were continuous and 6 were discrete. The independent variables include the personal characteristics, socio-economic factors, situational factors and psychological factors of farmers that may influence the dependent variables. Selection of these independent variables used in the study was logically taken from the review of past research and published literature related to the scope of the study (Renwick, 2010, and Aina, 2004).

**Table 2.** List of independent variables and measurements

s/n	Variables	Measurements	Expected signs
1.	Age ( $X_1$ )	Measured in terms of number of years of age.	negative relationship
2.	Marital Status ( $X_2$ )	This indicates whether respondents are married, unmarried, single, or widowed. This data was operationalized through scoring system labelled from questionnaire	positive relationship among married respondents
3.	Educational Level ( $X_3$ )	Education refers to the level of formal and non-formal education and this was scored in terms of ability to read and write and enrolment in primary, secondary schools or post-secondary.	Educational level positively affects use of information.
4.	Communication Skills ( $X_4$ )	Communication skills are referred to as the ability to express ideas effectively in written or spoken form, and the ability to listen attentively. This variable was measured using list of items selected through systematic procedure.	Communication skill was anticipated to have positive relationship
5.	Positiveness ( $X_5$ )	Defined as a person's quality that is characterized by displaying certainty, acceptance, or affirmation. It was measured by respondents' willingness to discuss agricultural matters with other farmers. Also, despite the harsh environment, their belief in one's self to succeed. It was operationalized as low, medium and high.	The variable was assumed to have positive relationship
6.	Income ( $X_6$ )	Operationally defined as the value of the products of the household after home consumption and income obtained from off-farm and non-farm activities that are expressed in Naira per year.	The income level was anticipated to have a positive relationship
7.	Size of land holding ( $X_7$ )	This refers to the area of cultivated land owned by the respondents or their families. It was assumed that the larger the farm size, the better access the farmer has to use combination of technological packages on the land.	Therefore, it was hypothesized that land size has a positive relationship
8.	Family size ( $X_8$ )	The size of the family of the respondent measured in terms of total number of members in the family including the elderly and children.	family size was assumed to have positive relation
9.	Radio Ownership ( $X_9$ )	The farmers who own the radio and listen to programmes or news have the opportunity of getting more agricultural information. Radio ownership by respondents was 1 for Yes and 0 otherwise	Information network has positive relation.
10.	Social participation ( $X_{10}$ )	This refers to the involvement in social activities and membership of the respondent in various formal and informal organizations, either as a member or as an office bearer. It was measured in terms of membership or official status in any formal or informal organizations, along with the frequency of participation and type of organization of which the farmer is a member using the scale developed by Trivedi (1963) with slight modifications.	Social participation was expected to have positive relationship with the dependent variable

11	Information Seeking behaviour ( $X_{11}$ )	This was defined as the degree to which the respondent was eager to get information from various sources on different roles he performs. This was measured in terms of how much information was sought, how frequently and from where the information was sought.	Information seeking behaviour was assumed to have positive relationship
12	Cosmopolitanness ( $X_{12}$ )	This is the degree of orientation of the respondent towards outside of the social system which he belongs. It is measured in terms of frequency of visits to outside his village and the purpose of such visits.	Expected to have positive relationship
13	Attitude towards development agent ( $X_{13}$ )	Defined as the degree of positive or negative attitude of farmers towards Development Agent. This variable was measured using the Likert scale model.	anticipated to have a positive relationship
14	Sharing of available information ( $X_{14}$ )	Defined as the extent to which the respondent shared the information with others, including family members, friends or neighbours, extension agent, etc.	anticipated to have a positive relationship
15	Access to credit ( $X_{15}$ )	Access to credit has impact on the level of utilization of recommended technological packages and this in turn will expose respondents to divergent information.	variable was assumed to have a positive relationship
16	Extension participation ( $X_{16}$ )	It was measured using a weighted index.	variable was assumed to have a positive relationship

Source: Field Survey (2013).

## RESULTS AND DISCUSSIONS

### Descriptive Statistics

The study examined individual features of respondents as they influenced their entrepreneur ability and these are educational attainment, communication ability, marital status, age, household size, attitude to change, and positiveness among others. Table 3 describes individual features of the sample respondents.

**Table 3.** Distribution of sample respondents based on their personal characteristics (N = 200)

Personal characteristics	Features	Frequency	Percent
Age of Respondents	15-29 (Younger)	45	22.5
	30-49 (Middle)	122	61.0
	50-65 (Older)	33	16.5
	<b>Total</b>	<b>200</b>	<b>100.0</b>

<b>Marital Status</b>	Single	57	28.5
	Married	103	51.5
	Widowed/Separated	40	20.0
	<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Level of Education</b>	Illiterate	32	16.0
	Can read and write	43	21.5
	Primary School	41	20.5
	Secondary School	62	31.0
	Post-secondary School	22	11.0
	<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Communication Skills</b>	Low	17	8.5
	Medium	93	46.5
	High	90	45.0
	<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Family Size</b>	1-3	47	18.8
	4-6	141	56.4
	7-9	39	15.6
	Above 9	23	9.2
	<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Radio Ownership</b>	No	77	38.5
	Yes	123	61.5
	<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Size of land holding in Acres</b>	0.1-1.99	59	29.5
	2.0-3.5	115	57.5
	Above 3.5	26	13.0
	<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Positiveness</b>	Low esteem in one's self to positiveness	34	17.0
	Medium esteem in one's self to positiveness	129	64.5
	High esteem in one's self to positiveness	37	18.5
	<b>Total</b>	<b>200</b>	<b>100.0</b>

Source: Field Survey, 2013

### ***Respondent's age***

The study revealed that respondents' ages range from 16 to 65 years old. The mean age was 36.16 years with the standard deviation of 13.04 years. Analysis of the arrays showed that respondents in the age bracket 30-49 years were the majority (61.0%), age bracket 15-29 years (22.5%) and age cluster 50-65 years (16.5%). Analysis of the age distribution reflected the active age bracket of the respondents to be in the mean distribution. Thus indicating that innovation or adoption of technology could easily be embraced and could also be hostile to disagreeable innovation or technology adoption.

### ***Respondent's marital status***

The results of the analysis of marital status of the respondents revealed that majority (51.5%) of the respondents were married and living together with their spouses. Those not married or engaged were 28.5% of the sampled population, while the widowed and separated respondents were the minority. Implication of this finding could signify that stable income generation and decent living among respondents could be useful in their togetherness as husband and wife, as the study showed that high proportion existed between stable families than others. In other words, joint deliberations and evaluation on issues and information can be jointly considered and best decisions could be adopted.

### ***Respondent's educational attainment***

It has been argued that an important factor which can influence the ability of a farmer/person to understand innovation is education. Also, underdevelopment occurring in most developing countries like Nigeria is the low level of education and high illiteracy rate among the people. Aina (2006) argued that poor education among Nigerian farmers has deprived them of the ability to make good use of agricultural innovation available to them. Consequently, this study deduced that education plays a great role in the entrepreneurial ability of the respondents and thus examined.

As indicated in Table 3, the description of the respondents showed that 16.0% were uneducated, while 11.3% were able to read, and write and 41.5% had post-primary school education. This indicates that for innovation to be appreciated and useful it must come in a language people will be able to understand, digest and use.

### ***Respondent's communication skills***

This study deduced communication skills to be the ability of a person to be able to express ideas effectively in written or spoken form, and also understand the language directed at his person. The study outlined three

types of communication skills levels as low, medium and high communication skills. Table 3 showed that about 91.5 % of the respondents had medium and high level of communication skills, respectively. This finding foretells that active information can be easily diffused and exchanged with another.

### ***Respondent's positiveness***

The study inferred positiveness as the disposition of a person towards acceptability, belief and certainty about an idea or innovation that will bring a positive change. Positiveness was captured in the study among respondents as readiness to discuss agricultural innovations they believe in with other farmers and seek necessary information and help with its adoption. Also, despite the harsh environment there is the belief in one's self to succeed. Adopting and use of agricultural innovations in the study was operationalized as low, medium and high. The study revealed that respondents who indicated low esteem in one's self to succeed are about 17.0%, while about 83% have a strong believe in one's self to succeed. The implication of this finding is that agricultural innovation success among adopters is tied to their esteem on the innovations. Thus scientists, agricultural extensions need to raise esteem of farmers on innovation brought to them through demonstrations of such innovation so that their positiveness could be high on such innovation.

### **Entrepreneurial process strategies and options**

Level of Entrepreneurial Process Strategies and Options that were employed by the household heads in order to cope with the effect of low income received from primary occupation are quantified. Due to low income earned from farming livelihood activities, household heads adopted entrepreneurial process strategies and options and diversified into other sources of income generating activities so as to improve household income and meet their basic needs. To assess entrepreneurial process strategies and options, the study adopted composite Entropy Index (CEI). Composite Entropy Index (CEI) was expended firstly by Chand (1995) and Shiyani and Pandya (1998). It was modified by Anna, (2002) and Daniel and Johnson, (2004). The Composite Entropy Index (CEI) is used to determine various levels of livelihood activities engaged in by the households.

This index possesses desirable properties that impart uniformity and fixity to the scale used as norm to examine the extent of diversification across the households. It is used to obtain entrepreneurial process strategies and options in this study. This connotes the degree of distribution and attention of activities by a singular quantitative pointer. It is expressed as

$$CEI_j = \left[ \sum_{i=1}^n Pi \log_N Pi \right] \left[ 1 - \left( \frac{I}{N} \right) \right] \quad (2)$$

Where  $Pi = \frac{Ai}{\sum Yi}$

$Pi =$  Proportion of the income of  $i^{\text{th}}$  activity relative to all activities

The results of the findings are presented in Table 4.

**Table 4.** Livelihood activities apart from crop farming found in the area of study

s/n	Type of activity	Households number (%)	Entrepreneurial success or failure (N = 200)
1.	Trading of manufactured goods	105 (52.5)	Failure and successive success
	Cassava processing		
	Garri	138 (69%)	Successful farming household/family
2.	Starch	71 (35.5)	
	Garri + Starch	46 (23.0)	
	Garri + Livestock feed	64 (32.0)	
	Garri + Starch + Livestock feed	23 (11.5)	
3.	Selling cassava raw tuber	81 (40.5)	Successive failure
4.	Money lending	53 (26.5)	Successful farming household/family
5.	Casual labour	62 (31.0)	
6.	Household head engaged in paid employment	83 (41.5)	Successful farming household/family
	Artisans		Failure and successive success
	Tailoring	31 (15.5)	
7.	Vulcanizer	18 (9.5)	
	Mason	13 (6.5)	
	Carpentry	11 (5.5)	
8.	Selling of agro-chemicals/farming inputs	42 (21.0)	Successful farming household/family
	Animal husbandry		Successful farming household/family
	Keeping dairy cattle	17 (8.5)	
9.	Goat and sheep keeping	52 (26.0)	
	Poultry	76 (38.0)	
	Piggery	23 (11.5)	
10.	Fishing	08 (4.0)	Successive failure
11.	Hunting	15 (7.5)	Failure and successive success
<b>Total</b>		<b>1032*</b>	

Source: Field Survey (2013).

Note \* denotes multiple responses occurred as one household/family may carry out more than one activity.

Table 4 revealed that majority of the single activity had been successfully undertaken by numerous cases, while most cases with several deeds had

a unique combination of activities (see Table 5). Thus, successful farmers were able to purposefully pursue a unique combination of activities, hence minimizing overall competition within the village. The study indicated that about 12 % of the respondents' families in this category had a reasonable income for a decent living. Also, the study indicated that 81% of this category of families had multiple sources of livelihood support as they were involved in several business ventures (26 out of 30 farming and 4 out of 7 non-farming families). The study further indicated that 15.5% of these families see "farming" as foremost income-generating activity.

Moreover, the study revealed that about 97% of those families that do not have a reasonable income for a decent living depend mainly on farming and do not engage in other income generating activities but sometimes sell their physical labour which hardly earned them a judicious income. Besides, about 4.5% of these families engaged in farming on profit-making scale while the others had subsistence farming. Furthermore, 89% of the non-farming families (i.e., 72 out of 81) were greatly dependent on selling their labour (as hired labourers) to farmers in the village.

**Table 5.** Pursuing opportunities by mobilizing resources through social networks and other sources

s/n	Capitalized opportunity	Nature of resource mobilization
1.	Commencement of buying and selling of manufactured goods	Friends and neighbour's experience (knowledge) about market conditions and also his contacts with buyers
2.	Commencement of the agrochemical and important farming inputs like fertilizer-selling business	Using a social contact (i.e., a trader) to purchase these inputs on long-term credit
3.	Money lending	Borrowing money from banks at a lower rate and lending them at high interest rates, which provides the opportunity to invest one's own money in other gainful activities (i.e., to avoid resource conflicts) Exchanging (a) each other's experience on credit worthiness of new customers and (b) trustworthy customers
4.	Introduction of motorcycle spare parts and repairs and tyre inflation to the motorcycle customers	Using a social contact (i.e., a trader) to purchase expensive spare parts on long-term, interest-free credit (overcoming capital constraints)
5.	Commencement of the cassava processed goods like, garri, cassava starch and livestock feed business (introduction of a modern technology to the area)	Using a social contact to obtain cassava processing on a no-obligation loan (with the promise of transferring the ownership with the success of the venture), which also helped them to overcome the capital constraints and collateral requirements

6. Exchange casual labour,	(1) Use of family labour: Family labour is used often to overcome hired cost incurred in the used of foreign (hired) labour and also to overcome time constraints in getting required labour for agricultural production, (2) Social contacts with Extension officials to obtain subcontracts in adjoining village. (3) Presence of physical labour of needy farmers. Inhabitants with low opportunity cost are always available for labour in respective villages in order to overcome labour shortages and working capital requirements. (4) Coordination of needy friends mainly to overcome the working capital requirements for cassava cultivation, later diversified into (a) cost reduction strategies such as bulk purchasing of fertilizer and agrochemical at a discounted rate with free transportation facility and (b) shock absorbing mechanism by forming a cooperative to assist in fund transfer
7. Contracting cassava harvesting and processing activities in the village	Coordinating a group of needy villagers (i.e., non-farming families) to contract cassava harvesting and processing. This helps (a) to curtail the cost of own cassava harvesting and processing and (b) to increase the income also by avoiding resource conflicts with hiring out the tractor (exchange of values also within the family)
8. Delayed selling of cassava products in order to take a higher price	Use of social contacts (i.e., traders) to overcome (a) lack of storage facilities and/or the risk of pest attacks (i.e., rat infestation) and (b) middlemen exploitation
9. Starting wholesale business to retailers of manufactured goods in the village	Using existing contacts (with wholesale traders) to obtain goods (at a wholesale scale) on interest-free credit in order to sell to newly emerged village retailers (this also helped him to overcome competition, i.e., extracting value from competitors)
10. Introducing the new products to the existing retailers.	Thus, exploiting social contacts to obtain these materials on interest-free credit and obtain the transport facilities free of charge from another contact.

Source: Field Survey (2013).

Table 5 indicated major livelihood activities of the respondents in the study areas by pursuing opportunities through mobilizing resources of social networks to influence income generation. It was observed in the course of data collection that debt is a major problem faced by the people as a result of seasonal fluctuations in income earnings from farming produce. To remedy this situation some of the people however, add value in a diverse way to basic cassava production. This is done either by planting early cassava or add value by processing cassava to Garri or other related products. This activity has helped most people to avoid the harvest surplus, and negotiate higher prices. Another option adopted was the use of cassava farms intercropped with other crops (like vegetables, melons) to add value to the land. Thus, it is reasoned that entrepreneurship is a method in which people see opportunities not identified by others (Oyebola and Ajiboshin, 2013).

Hence, activities listed in Table 5 indicates pursuit of opportunities the respondents were investigating and engaging in those new activities . These pursuits were equally familiar to all the farmers in the village, either successful or unsuccessful. The vital point, however, is that most of these pursuits needed capital financing, which was usually out of reach of these farmers. However, successful farmers incorporated coping strategies for survival, like hiring cassava processing machine in the first place before acquiring one, also mobilizing family labour for cassava processing. Once successful in this, they had an increasingly wide choice of opportunities to aim for next. The study deduced that there are multiple sources of business ventures that farmers could engage in, thus implicating that there exists a potential combination of activities, allowing much more scope for creativity and with the right education and positiveness these could improve their livelihood.

The study observed that about 53.5 % of the respondents who thrived on good harvests from farming operations did not recycle substantial part of the proceeds into farming operations. Thus, to meet the following year farming operations they are left with little for farming operations. In order to augment this shortfall, these categories of farmers resorted to borrowing to finance next cropping season and thus the cycle of poverty ensues. Therefore, to prepare for the next farming season, borrowed funds were used and most of the time farmlands were used as a collateral. When these loans were not redeemed at the appropriate/stipulated period, farmers eventually lost control of their farmland. The study found that about 55% of this category of people lost control of their farmland, either completely or partially.

It was also observed that those families that are tagged “successful” spend their farms’ proceeds effectively, as these families evaded strategies of not consuming too much of unreasonable goods, and not running into debt. These families thus displayed shrewdness and patience as well as capability in mastering the skills of cassava farming and its management. They also preferred to invest their surpluses into their business rather than lifestyle. Moreover, these categories of “successful” farmers can be tagged entrepreneurs because they shunned pointless debt, and slowly accrued capital, spotting opportunity and having capital to develop range of business at their disposal. The study found out that, at the time of the study, most of the successful farmers were engaging in an average of 3 business ventures.

In addition, their positiveness also helped to overcome the risk of defaults and sustain a thriving business venture. Furthermore, the study also observed that most of the successful farmers had the ability and the readiness to seize and explore opportunities. The study also noted that successful farmers had combined effectively entrepreneurial and managerial abilities in the running of the business ventures. These functions have been argued as necessary and

complementary prerequisites for success and interdependent components in the entrepreneurial matching process.

**Results of the multiple regressions**

The study adopted the use of Multiple Linear Regression (MLR) analysis to examine factors influencing the entrepreneurial processes strategies of the respondents. MLR model was fitted to assess the influence of the hypothesized independent variables on entrepreneurial processes of the respondents. SPSS version 17 was used for the analysis.

The study hypothesized 16 independent variables of 10 continuous and 6 discrete variables respectively. These variables were included in the model and used in MLR analysis. These variables were selected on the basis of theoretical explanation, reviews of similar studies and the results of various empirical studies (Morgan *et al*, 2010). Table 6 revealed that 7 variables of the 16 hypothesized independent variables were found to be significant. These hypothesized variables are: Education ( $X_3$ ), Income ( $X_8$ ), Radio Ownership ( $X_9$ ), Information seeking behaviour ( $X_{11}$ ), Attitude towards DAs ( $X_{13}$ ), Access to credit ( $X_{15}$ ) and Development agents/extension participation ( $X_{16}$ ).

**Table 6.** Coefficients of regression function

Variables	Coefficients		T	Sig.
	B	Std. Error		
Constant	-4.01	1.03	3.91	.001
$X_3$ – Educational level	.19*	.04	5.40	.000
$X_8$ – Family size	.71*	.16	4.35	.000
$X_9$ – Radio ownership	.18**	.06	2.95	.003
$X_{11}$ – Information seeking behaviour	.19**	.07	2.70	.004
$X_{13}$ – Attitude towards development agent	.72**	.27	2.66	.005
$X_{15}$ – Access to credit	.65***	.29	2.27	.019
$X_{16}$ – Extension participation	1.47***	.67	2.18	.021

\* Significant at 0.01, \*\* Significant at 0.05, \*\*\* Significant at 0.10  
 R = 0.715, R<sup>2</sup> = 0.665, adjusted R<sup>2</sup>= 0.614, F= 28.61 P = 0.000

The Multiple Correlation Coefficient (R = 0.715) indicates that the entrepreneur ability of the respondents, as explained by these hypothesized variables, are quite strong and positive. The results of the MLR value of coefficient of determination (R<sup>2</sup> = 0.665) and the adjusted R<sup>2</sup> of 0.614 implies that about 61% of the hypothesized 16 independent variables variation

explained the entrepreneur ability of the respondents. Past studies have argued that income is an important variable explaining the qualities of good households (Carter and Justis, 2009). Thus, this study hypothesized that farmers whose earnings are relatively high could be participating in technology packages and innovativeness which, in turn, will expose them to new business opportunities. Findings from this study indicated that income was positive and significant in explaining the entrepreneur ability of the respondents. The output of regression analysis ( $X_3 = .19$ ) thus indicated that 1 unit increment in educational level would bring about 0.2 increments in the knowledge of good farm management.

The other significant variables that were positive and significant include Radio Ownership ( $X_9$ ), information seeking behaviour ( $X_{11}$ ), attitude towards DAs ( $X_{13}$ ), access to credit ( $X_{15}$ ) and Development agents/extension participation ( $X_{16}$ ). The implication of this finding is that one unit increment in Radio ownership, Information seeking behavior and attitude towards DAs would bring about 0.18, 0.19 and 0.72 improvement in the entrepreneur ability of the respondents. This result implies the positiveness of farmers towards innovation and market, could raise the income potentials of such farmers and thus increase their entrepreneurial ability. Access to credit regression coefficient of  $X_{15} = 0.65$  suggest that access to credit was positive and a significant determinant of entrepreneur ability of farmer's, thus, a unit increase in access to credit would be accompanied by an increase in the entrepreneur ability of farmers. This means that increased access to credit increases utilization of recommended technological packages which expose farmers to different new information and can raise awareness on value addition.

Similarly, the output of the regression analysis ( $X_{16} = 1.47$ ) of Development Agents/Extension participation revealed that a unit increment in extension participation would bring about 1.469 units increment in the entrepreneur ability of farmers. This infers that, frequency of contacts or visits of development agents/extension agents to a farmer is very important for updating the knowledge and skills of farmers on farm technologies, practices or activities and the market. Thus, the availability of development agents/extension participation in the rural areas is of a paramount importance to entrepreneurial process.

## CONCLUSION

The study hypothesized that "even poor resource-starved environments are potentially diverse in economic opportunity for potential entrepreneurs, providing a diversity of choices and options." Despite the few resources

available, the respondents had taken advantage of the opportunities for entrepreneurial advancement. Successful farmers had diversified into other business ventures. Nevertheless, the study observed that the choice and multiplicity of these business activities was small in such a resource-limited environment, but the combination of activities was much greater. Each respondent was observed, especially those that had created a unique blend of successful business ventures. These attributes have shown that, for a business venture to be successful, each individual must demonstrate positiveness and pursue different strategic choices based on his or her unique perception of the available opportunities. As resources slowly accumulated, the practical range and choice of opportunities available also increased. If this diversity of opportunities can exist in such a poor rural environment, how much greater diversity of opportunities might there be in a more favoured environment?

The result of the qualitative analysis indicated that most of the unsuccessful farmers were partly unsuccessful because of lack of their positiveness in taking advantage of innovation and ideas around them. In addition, these categories of people appeared to lack the drive and motivation to systematically pursue opportunities, and, once in debt, found it almost impossible to reverse their fortune. This basic lack of managerial and organizational acumen tended not to be fatal when the range of business activities was low. Successful farmers combined both entrepreneurial and managerial skills to survive. This finding supports the work of Gasse (1985) that business efficiency must also be complementary with entrepreneurial processes.

An important question arises from this study: How far can we generalize from such an apparently unique context? Observations in the study areas showed that all the areas surveyed were poor by world standards, but within the town/village context, some farmers were better off than others in terms of status and wealth. These tended to be the minority of entrepreneurial farmers, who are most likely to make the best use of any subsidies and support that are available, but also, are least likely to need help. Targeting these categories of successful farmers who had adopted entrepreneurial process in their farm management for technical support from agricultural extension/scientists could make them even more effective, and increase the “trickle down” effect to the poorer and less successful farmers.

The outcome of the respondents’ entrepreneurial ability constituted the growth differentials of entrepreneurial process and also points to the strategies and options employed. Explaining the disparity in successes or failures of business operations is not swift. Factors that have influenced economic success or entrepreneurial success include the level of respondent’s positiveness, information seeking behaviour, access to credit and Development

agents/extension and participation in seminars/workshops on good farming management practices. Thus, the availability of development agents/extension participation in the rural areas is of a paramount importance to entrepreneurial process.

## References

- Aina, L.O. (2006). Information provision to farmers in Africa: The library-extension service linkage. *World Library and Information Congress: 72nd IFLA General Conference And Council 20-24 August*. Seoul, Korea.
- Aina, L. O. (2004). Library and information services to the neglected majority in Africa: The need for a restructuring of LIS curriculum in Africa. In *Towards a knowledge society for African development. Proceedings of the 16th Standing Conference of Eastern, Central and Southern African Librarians*. Kampala: Uganda Library Association, 292-303.
- Akin, F. & Peter, R. (2002). Entrepreneurship and illegality: insights from the Nigerian cross-border trade. *Journal of Business Venturing*, 17, 397-429.
- Allan, C., Eleanor, H. & Sarah, L. (2012). Understanding entrepreneurial cultures in family businesses: A study of family entrepreneurial teams in Honduras. *Journal of Family Business Strategy*, 3, 147-161.
- Alsos, G.A., Carter, S., Ljunggren, E. & Welter, F. (2011). *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. UK: Edward Elgar.
- Babatunde, R. O. & Qaim, M. (2010). Impact of off-farm income on food security and nutrition in Nigeria. *Food Policy*, 35(4), 303-311.
- Bardasi, E. & Sabarwal, S. (2009). *Gender, Access to Finance, and Entrepreneurial Performance in Africa*. World Bank Mimeo.
- Bennett, J. (2010). Informal firms in developing countries: entrepreneurial stepping stone or consolation prize?. *Small Business Economics*, 34(1), 53-63.
- Bozzoli, C. & Brück, T. (2009). Agriculture, poverty and post-war reconstruction: micro-level evidence from Northern Mozambique. *Journal of Peace Research*, 46(3), 377-97.
- Brück, T., Naudé, W. & Verwimp, P. (2011). Small business, entrepreneurship and violent conflict in developing countries. *Journal of Small Business and Entrepreneurship*, 24(2), 161-78.
- Bryant, C.R. (1989). Entrepreneurs in the rural environment. *Journal of Rural Studies*, 5(4), 337-348.
- Bygrave, W.D. (1994). *Portable MBA in Entrepreneurship*. New York: John Wiley & Sons.
- Carter, S. & Ram, M. (2003). Reassessing portfolio entrepreneurship. *Small Business Economics*, 21, 371-380.
- Cater, J. J. & Justis, R. T. (2009). The development of successors from followers to leaders in small family firms. *Family Business Review*, 22(2), 109-124.
- Chand, R. (1995). *A critique on the methods of measuring economic diversification*. Paper presented for the training course on Quantitative

- Techniques for Policy Analysis in Agricultural Economics (pp. 214-242). New Delhi Nov.27-Dec.9.
- Chen, S. & Ravallion, M. (2010). The developing world is poorer than we thought, but no less successful in the fight against poverty. *The Quarterly Journal of Economics*, 125(4), 1577-1625.
- Chu, H. M., Kara, O. & Benzing, C. (2008). An empirical study of Nigerian entrepreneurs: success, motivations, problems, and stress. *International Journal of Business Research*. 8(2). Retrieved from [http://findarticles.com/p/articles/mi\\_6773/is\\_2\\_8/ai\\_n31121252/](http://findarticles.com/p/articles/mi_6773/is_2_8/ai_n31121252/).
- Cornia, G. A. (1985). Farm size, land yields and the agricultural production function: An analysis for fifteen developing countries. *World Development*, 13, 513-534.
- Daniel, S. & Johnson, S. (2004). *Livelihood options? The Political Economy of Access, Opportunity and Diversification*. Overseas Development Institute (ODI) Working,233, 112-216.
- David, J. (2012). A new institutional approach to entrepreneurship and inequality in rural Russian villages: Survey findings from 1991 to 2006. *Journal of Eurasian Studies*, 3, 41-48.
- Discua, C., Howorth, C. & Hamilton, E. (2010). *Portfolio entrepreneurship as a solution to the succession crisis: A case study of women successors in Honduras*. In: Family Business Casebook Annual 2008-2009. USA: Kennesaw State University, 25-48.
- McMillan, S. T., Pieper, M. & Poutziouris, Z. (Eds.) (2009). Family business casebook annual 2008–2009 (pp. 25–48). USA: Cox Family Business Centre, Kennesaw State University.
- Fan, S. & Chan-Kang, C. (2003). Is small beautiful? Farm size, productivity and poverty in Asian agriculture. Plenary paper prepared for the 25th International Conference of Agricultural Economists, July 17. Durban, South Africa.
- Fry, F. (1993). *Entrepreneurship: A Planning Approach*. New York: West Publishing.
- Gries, T. & Naudé, W. (2011). Entrepreneurship and human development: A capability approach. *Journal of Public Economics*, 95(3), 16-24.
- Hazell, P. & Haggblade, S. (1993). Farm-nonfarm linkages and the welfare of the poor. In M. Lipton & J. van der Gaag (Eds.). *Including the Poor*. Washington, DC: World Bank.
- Jervell, A.M. (2011).The family farm as a premise for entrepreneurship. In: G.A. Alsos, S. Carter, A.E. Ljunggren, F. Welter (Eds.). *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. USA: Edward Elgar.
- Karatas, -Özkan, M. (2011). Understanding relational qualities of entrepreneurial learning: towards a multi-layered approach. *Entrepreneurship and Regional Development* 23, 877-906.

- Kodithuwakku, S. & Rosa, P. (2002). The entrepreneurial process and economic success in a constrained environment. *Journal of Business Venturing*, 17, 431-465.
- Morgan, S.L., Marsden, T., Miele, M. & Morley, A. (2010). Agricultural multi-functionality and farmers' entrepreneurial skills: a study of Tuscan and Welsh farmers. *Journal of Rural Studies*, 26, 116-129.
- Nagayets, O. (2004). *Small farms: current status and key trends*. Research Workshop on The Future of Small Farms organized by IFPRI, Imperial College and ODI, Wye, June 2005.
- Nicks, L. (2008). The History of Entrepreneurship in Nigeria. Retrieved from <http://bizcovering.com/history/the-history-of-entreprenership-in-Nigeria>.
- Onipede, S. (2003). Towards Creating an Environment for Sustainable Economic Growth in Nigeria International Experience. Retrieved from: <http://www.economist.com/countries/Nigeria/profile.cfm?folder=profile-Economic%20structure>.
- Oyelola, O. T. & Ajiboshin, I. O. (2013). Entrepreneurship for Sustainable economic growth in Nigeria. *Journal of Sustainable Development Studies*, 2(2), 197-215.
- Raimi, L. & Towobola, W. L. (2011). Open Distance Learning (ODL): A catalyst for educational and entrepreneurship development in Nigeria. *Continental Journal of Education Research*, 4(3), 1-11.
- Rijkers, B & Costa, R. (2010). Gender and rural non-farm entrepreneurship. *World Development* 40(12), 2411-2426.
- Parker, S. (2008). Entrepreneurship among married couples in the United States: a simultaneous probit approach. *Labour Economics*, 15(3), 459-481.
- Parker, S. (2013). Moving beyond entrepreneurial skills: Key factors driving entrepreneurial learning in multifunctional agriculture. *Journal of Rural Studies*, 32, 208-219.
- Pingali, P. (2010). *Who is the smallholder farmer?* Norman E. Borlaug International Symposium, the World Food Prize, October 13-15, 2010, Des Moines, Iowa.
- Renwick, S. (2010). Current Trends in Agricultural Information Services for Farmers in Trinidad and Tobago/Caribbean. Paper presented at the World Library and Information Congress: 76th IFLA General Conference and Assembly, 10-15 August 2010, Gothenburg, Sweden.
- Scott, M., Fadahunsi, A. & Kodithuwakku, S. (1997). Tackling adversity with diversity. In S. Birley, D.F. Muzyka (Eds.). *Mastering Enterprise: Your Single-Source Guide to Becoming an Entrepreneur* (FT Mastering Series). London: Pitman.
- Shiyani, R.L. & Pandya, H.R. (1998). Diversification of agriculture in Gujarat: A spatio-temporal analysis. *Indian Journal of Agricultural Economics*, 53(4). 627-639.
- Stevenson, H.H. (1997). The six dimensions of entrepreneurship. In S. Birley, D.F. Muzyka (Eds.). *Mastering Enterprise: Your Single-Source Guide to Becoming an Entrepreneur* (FT Mastering Series). London: Pitman.

- Tilman, B., Wim, K. D. & Philip, V. (2013). Entrepreneurship and violent conflict in developing Countries. *WIDER Working Paper No. 2013/28*.
- Timmons, J. (1999). *New Venture Creation: Entrepreneurship for the 21st Century*. Boston: McGraw-Hill.
- UNECA. *Economic Report on Africa 2009. Challenges to Agricultural Development in Africa*. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa and African Union.
- Vik, J. & McElwee, G. (2011). Diversification and the entrepreneurial motivations of farmers in Norway. *Journal of Small Business Management*, 49, 390-410.
- Wiggins, S. (2009). *Can the smallholder model deliver poverty reduction and food security for a rapidly growing population in Africa?* FAC Working Paper No. 08. London: Overseas Development Institute.

### **Abstrakt (in Polish)**

*Twierdzi się, że proces przedsiębiorczości napędzany możliwościami, kreatywny, efektywny pod względem wykorzystania zasobów, może wpływać na tworzenie dochodów drobnych rolników, którzy stosują umiejętności w zakresie przedsiębiorczości i innowacji w swojej działalności rolniczej. Niniejsze opracowanie, w oparciu o dowody zebrane w południowo-zachodniej Nigerii, bada strategię procesu przedsiębiorczości, wykorzystywane do wzrostu dochodów drobnych rolników. Procedury pobierania próbek obejmują trzy etapy selekcji próby 240 rolników, ale tylko dane uzyskane od 200 były przydatne. Do analizy i opisu danych stosowano statystyki opisowe i wnioskowania statystycznego. Przedział wiekowy respondentów waha się od 16 do 65 lat, a średnia wieku badanych wynosiła 36,16 lat. Badania wykazały, że 5% próba miała skromne umiejętności komunikacyjne, wspomagające skuteczność procesów przedsiębiorczości, a około 83% wykazało się silną wiarą w siebie i własny sukces. Rolnicy z powodzeniem prowadzący gospodarstwa, prowadzili też wiele, zbliżonych charakterem, działalności gospodarczych generujących dochód. Precyzyjne określenie docelowej grupy przedsiębiorców i udzielenie im wsparcia, przyczyniłoby się do jeszcze większej ich efektywności.*

**Słowa kluczowe:** przedsiębiorczość rolna, umiejętności w zakresie przedsiębiorczości, efektywne zarządzanie, małe gospodarstwa rolne, identyfikacja potrzeb szkoleniowych.

### **Biographical note**

**Dr. Temidayo Gabriel Apata** has been an AGRODEP member since November 2012. At present, he is a Senior Lecturer at the Department of Agricultural Economics and Extension, Federal University, Oye-Ekiti, Ekiti State, Nigeria. He holds a Ph.D. in Agricultural Economics from the University of Ibadan, Nigeria. He specializes in economic modeling. His research interests include climate change, small-scale farms, poverty, and food security.