Entrepreneurial Education and Self-employment: Does Entrepreneurial Self-efficacy Matter?

Moses Kisame Kisubi ¹, Ronald Bonuke ², Michael Korir ³

Moi University Kenya, and Makerere University Business School Uganda
School of Business and Economics, Moi University, Kenya²,³

ABSTRACT

Purpose – The study sought to determine the mediating role of entrepreneurial self-efficacy in the relationship between entrepreneurship education and self-employment intentions.

Design – A cross-sectional and explanatory survey approach was employed using a systematic sampling technique. Data were collected from a sample of 458 undergraduate finalists from two Ugandan universities.

Results – Results of the study indicate that two predictors significantly influence self-employment intentions. Results also suggest that entrepreneurial self-efficacy partially mediates the relationship between entrepreneurship education and self-employment intentions.

Implications – Curriculum developers should develop entrepreneurship curriculum content geared towards stimulation of self-employment intentions among learners via entrepreneurial self-efficacy. Second, educational and economic policymakers should design policies and programs like startup capital to enable graduates to realize their self-employment intentions.

Originality/value – The study provides initial evidence on the mediating effect of entrepreneurial self-efficacy between entrepreneurship education and self-employment intentions.

ARTICLE INFO

Received: November 6, 2020
Revised: January 11, 2021
Accepted: January 25, 2021
Published: January 30, 2021

Keywords:
Entrepreneurship Education
Entrepreneurial Self-efficacy
Self-employment Intentions
Students
Uganda

Introduction

Self-employment intention is a road to achieving desirable economic growth and development. It is the most appropriate method for addressing household poverty and unemployment for graduates (Barba-Sánchez & Atienza-Sahuquillo, 2017; Vuorio, Puumalainen, & Fellnhofer, 2018). This is based on the premise that self-employment intentions result in creating new firms, thus offering employment opportunities that are the engine to economic growth (Nabi & Holden, 2008; Wolfe & Patel, 2018).
On realization of the significant contribution of self-employment, governments are rolling out programs aimed at promoting self-employment. For instance, entrepreneurship education has been integrated into strategic plans and curriculums to endorse self-employment (Ismail, Jaffar, & Hooi, 2013; Nowiński, Haddoud, Lančarić, Egerová, & Czeglédi, 2019). In Uganda, unique programs and initiatives such as youth venture capital fund and youth livelihood fund have been developed to promote youth and graduate self-employment (Ntale et al., 2020).

However, graduate self-employment among graduates is still low at 22 percent (Awiti, 2016). The Global Entrepreneurship Monitor shows that, compared to 56.78 percent non-graduates, only 29.97 percent of the graduates are self-employed (Balunywa et al., 2013). According to the Uganda National Council for higher education tracer study of 2018, only 18.2 percent of 2015/2016 opted for self-employment (Babuetsiza, 2019). The low level of graduate self-employment has left graduate unemployment at 60 percent in Uganda (Ngoma & Dithan Ntale, 2016).

Given the critical role of self-employment intentions, there has been a research interest to shed light on the factors impacting self-employment intentions. Through critical literature review, psychological and contextual factors have been widely discussed and linked to self-employment intentions. However, entrepreneurship education occupies a central position in the study of student’s self-employment intentions. Though this area is widely discussed, researchers have found contradictory results as some have established a positive correlation (see; Afolabi, Kareem, Okubanjo, Ogunbanjo, & Aninkan, 2017; Ebewo, Rugimbana, & Shambare, 2017; Gerba, 2012), while others have found no or negative correlation (see; Henley, 2005; Joensuu et al., 2013; Michelle & Tendai, 2016; Nabi et al., 2010).

Despite an increase in studies focusing on student’s self-employment intentions (SEI), entrepreneurship education (EE), and entrepreneurial self-efficacy (ESE), most of these studies have concentrated on the direct effects (see; Abdullahi, Zainol, Daud, & Yazid, 2017; Ebewo, Shambare, & Rugimbana, 2017; Faloye & Olatunji, 2018). There is little evidence (not only in Africa) concerning EE’s indirect effect on SEI via ESE (Puni, Anlesinya, & Korsorku, 2018). Studying the mediating function of ESE has the potential to unveil a powerful mechanism for translating EE courses into SEI and facilitating the growth of potential entrepreneurs (Matlay, Abaho, Olomi, & Urassa, 2015; Nowiński & Haddoud, 2019).

This research has made significant contributions to both theory and practice. Theoretically, the study provides initial evidence regarding the mediating role of ESE in the EE-SEI relationship. ESE improves the relationship between entrepreneurship education and student’s self-employment intentions (Puni et al., 2018). As individuals willingly embrace the uncertainty surrounding the entrepreneurial profession, ESE serves as a motivating factor in the entrepreneurial process (Miranda, Chamorro-Mera, & Rubio, 2017; Nabi, Liñán, Fayolle, Krueger, & Walmsley, 2017).

The study also provides practical implications to policymakers, curriculum developers, and university management in developing entrepreneurship curriculum content geared towards enhancing students’ SEI. There is a need to design programs to provide startup capital to graduates to realize their SEI. This is because SEI is not static once developed; they can fade out as a result of delays in their realization and interaction with the unfriendly business environment (Boukamcha, 2015; Piperopoulos & Dimov, 2015).

**Research problem**

Entrepreneurship education occupies a central position in the study of self-employment intentions among students. Although this area is widely studied, there is no consensus whether entrepreneurship education directly influences self-employment intentions. For instance, several searchers (see; Henley, 2005; Joensuu, Viljamaa, Varamäki, & Tornikoski, 2013; Nabi, Holden, & Walmsley, 2010; Wu & Wu, 2008) have found that entrepreneurship education has no or hurts self-employment intentions of students. On the other hand, these results contradict the findings (Afolabi et al., 2017; Ebewo et al., 2017; Gerba, 2012). A strong
positive association between entrepreneurial education and self-employment intentions was established. Therefore, this study sought to determine the indirect effect of entrepreneurship education on self-employment intentions through entrepreneurial self-efficacy.

**Research objectives**

The study was guided by four research objectives;

1. To determine the association between Entrepreneurship Education and Entrepreneurial Self-Efficacy
2. To find out the effect of Entrepreneurial Self-Efficacy on Self-Employment Intentions
3. To investigate the influence of entrepreneurship education on self-employment intentions
4. To establish the indirect impact of entrepreneurial self-efficacy in the link between entrepreneurship education and self-employment intentions.

**Research questions**

The study aimed to answer the following research questions;

1. Does entrepreneurship education have a significant effect on entrepreneurial self-efficacy?
2. Does entrepreneurial self-efficacy have a significant effect on self-employment intentions?
3. What effect does entrepreneurship education have on self-employment intentions?
4. In the association between entrepreneurship education and self-employment intentions, what is the indirect impact of entrepreneurial self-efficacy?

**Literature Review**

**Social Cognitive Theory (SCT)**

Bandura's SCT is one of social psychology's most influential and widely celebrated theories, and its presence has spread to areas like entrepreneurial learning (Nabi et al., 2017). The approach is grounded on self-efficacy as a predictor of any behavior. Self-efficacy is the ability, desire, and confidence of an individual to produce good results (Matlay et al., 2015). For the study context, Entrepreneurial self-efficacy refers to the belief in one's ability to participate efficiently in the development of business ventures based on a personal evaluation of one's entrepreneurial skills (Watson, Gatewood, Lewis, Dempsey, & Jennings, 2014). The theory indicates that high self-efficacy directs actions, forms courses of action, and increases perseverance in the face of barriers (Bandura, 2005). It has been found that the correlation between self-efficacy and career intent varies from 0.3 to 0.6 (Bandura, 1991; Krueger, Reilly, & Carsrud, 2000).

Scholars have concluded that this association is more robust than other predictors used in entrepreneurship research. For instance, Krueger et al., (2000) argued that self-efficacy is a vital element of entrepreneurship intent. In the context of entrepreneurship, People with a high degree of entrepreneurial self-efficacy (ESE) are more interested in entrepreneurial activities (Harinie, Sudiro, Rahayu, & Fatchan, 2017; Liguori, Bendickson, & McDowell, 2018). Therefore, ESE is a robust measure to determine a person's confidence in his/her ability to successfully launch an entrepreneurial venture (Karlsson & Moberg, 2013).

The theory states that four principal sources of information exist from which an individual's self-efficacy can be developed: (1) enactive mastery, i.e., one's prior performance accomplishments, (2) Vicarious learning, i.e., observing how others perform, (3) Verbal persuasion, i.e., other's feedback that one can serve well, and (4)
Physiological arousal, i.e., data on one's physiological condition (Watson et al., 2014). Scholars like Nowiński et al., (2019) and Watson et al., (2014) have shown that these sources can be provided by entrepreneurship education. For instance, vicarious learning and enactive mastery can be attained by students through storytelling by successful entrepreneurs, observing their role models performing, or working on practical projects like an internship. Students can also meet entrepreneurs through field visits and guest lecturers, watch or discuss successful entrepreneurs' stories amongst themselves. These equip students with entrepreneurial self-efficacy. Therefore, ideally, exposure to entrepreneurship training could generate steadily higher levels of self-efficacy. We, therefore, proposed that:

H1: Entrepreneurship education positively influences entrepreneurial self-efficacy

Theory of Planned Behavior (TPB)

TPB by Ajzen (1991b) argues that an individual's behavior is primarily determined by its intention to carry out that behavior. The intention is a person's readiness to participate in a given activity (Ajzen, 2011). The greater the intention of acting, the greater the chances of a person carrying it through (Ajzen, 1991b). According to Baluku, Bantu, and Otto (2018), the best predictor of entrepreneurial undertakings is entrepreneurial intentions. Consequently, self-employment depends on the person's decision to pursue or not do so (Majogoro & Mgabo, 2012).

The theory posits that behavioral intention is determined by three components: (1) Attitude towards behavior: the degree to which a person has a favorable or unfavorable behavioral assessment (Ajzen, 1991a). Thus, if self-employment is more appealing to students, the intention to work for themselves will be high and vice versa (Ismail et al., 2013; Liñán, 2004; Majogoro & Mgabo, 2012). (2) Perceived social norm, or pressure to perform the behavior. (3) Perceived behavioral control—the perception of ease or difficulty in carrying out a specific action (Krueger et al., 2000).

Perceived behavioral control relates to self-efficacy construct or perceived feasibility (Ajzen, 2011). Feasibility perceptions have been found to consistently predicting goal-directed behavior like self-employment. Most importantly, Perceived behavioral control, including self-employment as an entrepreneur, drives career decisions (Krueger et al., 2000). Ajzen's TPB treats ESE as an essential predictor of self-employment intentions (Krueger and Reilly 2000). Empirically, this association has been tested and verified by many researchers (see; Margahana & Negara, 2019; Piperopoulos & Dimov, 2015; Schmutzler, Andonova, & Diaz-Serrano, 2018). A positive correlation between ESE and SEI among university students from China and Spain was also found (Shahab, Chengang, Arbizu, & Haider, 2019). We, therefore, suggested that:

H2: Entrepreneurship self-efficacy positively influences Self-employment intentions

Entrepreneurship education (EE) and self-employment intentions (SEI)

Entrepreneurship education (EE) can substantially change participants' SEI (Iglesias-Sánchez, Jambrino-Maldonado, Velasco, & Kokash, 2016). EE equips students with the ability to start new ventures, run their business more effectively, or assist other entrepreneurs (Rasmussen & Sorheim, 2006). However, previous studies on EE and SEI have yielded contradicting results. Several findings of the study show a positive relationship, while others indicate a negative relationship. For example, Gerba (2012) shows that students who have completed entrepreneurship training seem to have more excellent entrepreneurial intentions than their peers who have not done so. Farashah (2013) in Iran found that completing a course in entrepreneurship increases the level SEI by 1.3 times.

Similarly, the study results by Afolabi et al., (2017) on EE's effects on Self-employment initiatives among Nigerian science & technology students show that EE is a successful strategy and has a positive impact
on Self-employment initiatives. Several researchers have also established this association (see; Mahendra, Djatmika, & Hermawan, 2017; Barba-Sánchez & Atienza-Sahuquillo, 2017, 2018; Gelaidan & Abdullateef, 2017; Muharam & Serah, 2014).

On the other hand, contradictory results have also been found. Nowiński et al., (2019) show, for example, that the direct effect of EE was positive and significant in only one of the four Vise grad countries in Poland. The negative findings are consistent with Abdullahi et al., (2017), who discovered that the more education a person gets, the lower the likelihood of the individual taking entrepreneurship as a profession. Besides, findings of an empirical study by Joensuu et al., (2013) on the diploma, degree, and postgraduate students indicate that self-employment intentions seem to decrease with an increase in education. Similar results have been found (Vanevenhoven and Liguori, 2013; Michelle & Tendai, 2016; Mahendra et al., 2017). On this backdrop, we proposed that:

H3: Entrepreneurship education influences self-employment intentions

The indirect effect of entrepreneurial self-efficacy (ESE)

Due to scanty literature in this area, reference is made to SCT and empirical literature from related fields. The theory suggests that self-efficacy directs conduct, forms courses of action, and increases perseverance in the face of barriers (Bandura, 2005), which are necessary for students to realize their self-employment intentions. The theory further asserts that the association between self-efficacy and career intent has been found to range between 0.3 and 0.6 (Bandura, 1991; Krueger et al., 2000). The empirical studies have proven this association (Piperopoulos & Dimov, 2015; Schmutzler et al., 2018; Wang, Chang, Yao, & Liang, 2016). The theory also suggests that self-efficacy develops from four sources: enactive mastery, verbal persuasion, vicarious learning, and physiological arousal. Researchers have tested and demonstrated that EE can provide these sources (Nowiński et al., 2019; Watson et al., 2014). A positive correlation between EE and ESE was found (Matlay et al., 2015; Welsh, Tullar, & Nemati, 2016). We, therefore, postulated that:

H4: ESE mediates the association between EE and SEI.

Methodology

Research Design

A cross-sectional and explanatory research design was utilized to collect and analyze data in this study. A systematic sampling technique was employed as recommended by (Tharenou, Donohue, & Cooper, 2007) for large populations to identify the final participants from the two selected universities (e.g., Makerere University and Kyambogo University). Data was collected using close-ended self-administered questionnaires anchored on a 7-point Likert scale. The questionnaire was a preferred data collection instrument because it is an efficient method for collecting first-hand information (Navarro-Rivera & Kosmin, 2011). Equally, questionnaires were ideal for this study because of their suitability to collect information that is not directly observable, such as opinions or individual experience (Gall, Gall, & Borg, 2007).

Population and Sample Size

Data was collected from a sample of 458 final year undergraduate students from Makerere and Kyambogo Universities. That is College of Business (151) and College of Engineering (93) for Makerere university, while faculty of management and entrepreneurship (136) and faculty of engineering (78) for Kyambogo university. These two Universities were considered because they are the oldest and leading public universities in Uganda. The study population consisted of 6,408 final year undergraduate students of the
academic year 2019/2020. The sample size was determined using Yamane's formulae (Yamane, 1973). Findings indicate a response rate of 87%.

**Measurements**

SEI was measured by adapting ten items of Liñán and Chen (2009) and Kim-Soon, Ahmad, and Ibrahim (2014). EE was operationalized using the ten items (Puni et al., 2018), and ESE was measured by adopting and modifying the 17 items (De Noble, Jung, & Ehrlich, 1999; Shook & Bratianu, 2010). All the scales were anchored on a 7-point Likert scale.

**Participant's demographic characteristics**

Three hundred eighty-eight questionnaires were found usable and were considered for final analysis. Table 1 findings below show that 50.8% of the respondents were female, while 49.2% were male. For the respondent's age, the majority, 88.9%, were between the age of 20-25, followed by 26 – 30, 9.3%, then above 30 years at 1%, and finally, only 0.8% were below 20 years. Regarding the program offered, most of the students, 72.2%, studied business programs while 27.8% provided non-business programs. Lastly, most of the student's parents or guardians, 62.6%, are self-employed, and only 37.4% are employed.

| Variable                  | Factor                  | Frequency | Valid percent |
|---------------------------|-------------------------|-----------|---------------|
| Gender                    | Female                  | 197       | 50.8          |
|                           | Male                    | 191       | 49.2          |
| Age                       | Below 20 years          | 3         | .8            |
|                           | 20 - 25 years           | 345       | 88.9          |
|                           | 26 - 30 years           | 36        | 9.3           |
|                           | Above 30 years          | 4         | 1.0           |
| Program                   | Non-business program    | 108       | 27.8          |
|                           | Business program        | 280       | 72.2          |
| Family background         | Employed parents/guardian| 145       | 37.4          |
|                           | Self-employed parents/guardian | 243   | 62.6          |

Source: Research data

**Descriptive, Reliability, and Correlation Results**

Table 2 results reveal that SEI has the highest mean of 5.97 with a standard deviation of .877 followed by EE of 5.86 and .830, while ESE has the lowest mean of 5.83 and a standard deviation of .787. Additionally, a reliability test was performed, and results reveal that all the study variables were found reliable with Cronbach's Alpha above .7. Further results show that all variables positively and significantly correlate with each other. ESE and EE have the highest association of $r = .626$, $p < .01$, EE and SEI have the lowest correlation of $r = .539$, $p < .01$, while ESE and SEI report $r = .591$, $p < .01$.

| Variable                           | Mean | SD    | Reliability | SEI   | EE    |
|------------------------------------|------|-------|-------------|-------|-------|
| Self-employment Intention (SEI)    | 5.97 | .877  | .845        | -     | -     |
| Entrepreneurship Education (EE)    | 5.86 | .830  | .849        | .539**| -     |
| Entrepreneurial Self-efficacy (ESE)| 5.83 | .787  | .930        | .591**|.626**|

**. Correlation is significant at the 0.01 level (2-tailed).**
Factor analysis

Principle component factor analysis was run to check on data sample adequacy. The Kaiser-Mayer-Olkin for the three study variables was 0.940 above threshold of 0.5, implying the sample was adequate (Taherdoost, 2016). The Bartlett’s Test of Sphericity was significant (chi-square = 6744.884, df 666 P=.000). Thirty-seven items were factor analyzed with Varimax rotation. The analysis yielded three factors explaining a total variance of 46.21%. Fifteen items loaded under factor1, which accounts for 20.23% variance; this factor was named ESE. The second factor was called SEI with nine items and accounting for 13.64% variance. Lastly, nine items loaded under factor three and was named EE, explaining a 12.34% variance. Given that the study items were developed from different contexts, four items relating to factor1 and factor3 were excluded from the study due to non-loading.

Table 3: Factor analysis

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .940 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 6744.884 |
| Df | 666 |
| Sig | .000 |
| Variable items | Fr 1 | Fr 2 | Fr 3 |
| I am prepared to do everything to start my own business. | .559 |
| I will make every effort to start my own company and run it. | .648 |
| I am determined to establish a company in the future. | .703 |
| I thought very seriously about starting a business. | .709 |
| I have deep confidence in being self-employed. | .509 |
| Within five years of graduation, I plan to start a company. | .572 |
| I prefer to be self-employed with my expertise. **dropped** | |
| After completing my studies, I have a strong intent to start my own company. | .613 |
| Rather than becoming an employee in a company, I prefer to be self-employed. | .631 |
| I am ready to face the challenges of creating a new business | .595 |
| I have learned several ways to generate basic business ideas **dropped** | |
| Education has enabled me to identify alternative career options | .619 |
| Education has enhanced my ability to perceive business opportunities in the environment better | .643 |
| Education has empowered me to solve economic and social problems in my surroundings for a fee | .508 |
| Education has enabled me to understand the traits of successful entrepreneurs | .681 |
| Education provides me with a sense of independence. | .643 |
| Education increases my understanding of the various forms of companies I can set up | .576 |
| I have acquired the expertise, experience, and skills necessary to build, grow and manage a new company. | .604 |
| Education increases my appreciation of self-employed people's roles and rights and their loyalty to their stakeholders. | .555 |
| Education has strengthened my understanding of the numerous sources | .576 |
| I can receive funding to start a new company. | |
| I can generate new ideas **dropped** | |
| I will take responsibility for new thoughts and choices. **dropped** | |
| I can achieve business results that are important to me | .503 |
| I am confident that I will achieve my targets even when facing challenging tasks | .510 |
| Under certainty and risk, I can make the right decisions | .655 |
| I can create and present a well-conceived business plan to potential investors. | .626 |
| I can launch my business venture | .595 |
| From a wider environment, I can recognize a business opportunity. | .666 |
| I have the skills needed to participate in startup activities. | .599 |
I know what it takes to start my own business. 
I can comprehend the language of business and startups. 
For a business idea, I am able to conduct a market analysis. 
I can recognize the unmet needs of customers. 
I can do entrepreneurial tasks very well compared to other students. 
I am confident that I can perform many different entrepreneurial tasks efficiently. 
I can successfully overcome the challenges of business startups. 
I think I can succeed in any effort that I have put in my mind.

Variance 
| Value  |
|-------|
| 20.23 |
| 13.64 |
| 12.34 |

Eigen values 
| Value  |
|-------|
| 4.94  |
| 2.31  |
| 1.26  |

Source: Research data

Results and Discussion

Results

We tested whether SEI differences were significant between business and non-business students using one way ANOVA. The results of Table 4 show that there was no statistically significant difference between business and non-business students in their SEI (F=1.173, P>.05).

Table 4. One way ANOVA results

| Variable                      | Program            | N   | Mean  | SD    | F    | Sig. |
|-------------------------------|--------------------|-----|-------|-------|------|------|
| Self-employment Intentions    | Non-business program | 108 | 5.8868| 1.00075| 1.173| .279 |
|                               | Business program   | 280 | 5.9944| .82467|      |      |
|                               | Total              | 388 | 5.9645| .87723|      |      |

Source: Research data

Hypotheses testing

Hayes (2018) PROCESS macro vs3.2 (Model 4) was utilized to test for the hypotheses. The four steps of MacKinnon (2012) were followed by determining the effect of:

Step1: EE on ESE
Step2: ESE on SEI
Step3: EE on SEI while controlling for ESE
Step4: Lastly, testing for mediation, which is the product of a1 and b1

We controlled for gender, age, program, and family background. Results in table 4 model1 show that EE significantly affects ESE $\beta=.588$, p<.001. All the control variables were not significant except age $\beta=.219$, p<.05; thus, the overall model explains 41.45% variance. In the second model, ESE was significantly influencing SEI $\beta=.448$, p<.001 with gender and family background being statistically significant at $\beta=.175$, p<.05 and $\beta=.146$, p<.05 respectively this model account for 41.78% variance. Furthermore, we tested the effect of EE on SEI while controlling for ESE using model 2. Results indicate that EE significantly influences SEI $\beta=.293$, p<.001. Lastly, bias-corrected percentile bootstrap method findings show that EE’s indirect impact on SEI through ESE was significant (a×b), $\beta = .264, SE = .046, 95\% CI = .182$ to $.359$ (see table5, model 3). The indirect effect model indicates a partial mediation between EE on SEI via ESE. Model 4 (Table 5) indicates the total effect $(a_1* b_1) + C_1$ of the findings of EE on SEI is $\beta = .557$, p<.001. Further, results reveal that gender and family background significantly affects SEI $\beta = .215$, p<.05 and $\beta = .202$, p<.05, respectively. This model
Table 5: Direct and indirect effects

| Predictors     | Model1 (ESE) | Model2 (SEI) | Model3 Mediation | Model4 (SEI) Total effect |
|----------------|--------------|--------------|------------------|--------------------------|
|                | $\beta$ | $t$ | $\beta$ | $t$ | $\beta$ | $t$ |
| Gender         | .090 | 1.404 | .175* | 2.443 | .215** | 2.799 |
| Age            | .219* | 2.543 | -1.39 | -1.435 | -0.041 | -0.392 |
| Program        | -.062 | -.857 | -.046 | -.570 | -.074 | -.850 |
| Family         | .124 | 1.872 | .146* | 1.976 | .202* | 2.544 |
| E/ship         | .588*** | 15.488 | .293**** | 5.443 | .482×.623=.264 | .557**** | 12.245 |
| E/ self efficacy | - | - | .448*** | 7.877 | - | - |
| R²             | .415 | .478 | - | - | .323 |
| F              | 54.089*** | 45.571*** | - | - | CI=.182,.359 | 36.449*** |

Note: *$p<.05$, **$p<.01$, ***$p<.001$, ESE=Entrepreneurial Self-efficacy, SEI=Self-employment Intensions

Discussion

Results of the study indicate that EE significantly influences ESE. This implies that when individuals are subjected to entrepreneurial training, their level of self-efficacy is improved. Our results agree with Karlsson and Moberg (2013)’ findings, who argue that the entrepreneurship program effectively enhances ESE. Similarly, Shinnar, Hsu, and Powell (2014) argued that EE strengthens ESE, especially for those with little or no self-efficacy at the beginning of the course. On the contrary, Watson et al., (2014) demonstrate that though there was an improvement in student's ESE due to the entrepreneurship course, there were gender differences with female students reporting low ESE before and after the course.

Further, our results are supported by TPB and empirical evidence, showing that ESE has a positive relationship with SEI. Shahab et al., (2019) assert that individuals with high ESE can develop and apply unique and original ideas. Similarly, Bandura (1997) and Krueger et al., (2000) state that, unlike their counterparts with low self-efficacy, individuals with a high level of self-efficacy for a particular activity are more likely to persevere in achieving that job. Furthermore, results show that EE directly influences SEI. Our findings are supported by studies of Gelaidan and Abdullateef (2017), Iglesias-Sánchez et al., (2016), Mahendra et al., (2017), Puni et al., (2018), who reveals that EE positively and significantly influences Self-employment Intention. However, our results contradict other studies (see; Abdullahi et al., 2017; Joensuu et al., 2013; Nowiński & Haddoud, 2019; Vanevenhoven & Liguori, 2013).

Finally, the mediation findings are reinforced by Liñán, Rodríguez-Cohard, and Rueda-Cantuche (2011) argument that there is an interaction between entrepreneurial awareness, ESE, and SEI. Further, Liñán (2004) notes that a greater understanding of the entrepreneurial world will undoubtedly contribute to more rational views of entrepreneurship that will lead to intentionality growth. Such arguments are in line with Bandura, who asserts that enactive mastery, physiological arousal, vicarious learning, and verbal persuasion are the principal sources of self-efficacy, which is the primary determinant of any actions (Bandura, 2002).

Conclusion

In conclusion, the study's goal was to determine the indirect influence of entrepreneurship education on self-employment intentions via entrepreneurial self-efficacy. Results suggest that entrepreneurship education and entrepreneurial self-efficacy have a positive and significant impact on self-employment intentions. Also, the association between entrepreneurship education and entrepreneurial self-efficacy was found significant. Lastly, the relationship between entrepreneurship education and self-employment intentions was partially
mediated by ESE. The study findings validate the TPB, which argues that although "beliefs" are indispensable but deficient for the stimulation of self-employment intentions. Our results also support the assertion by SCT that the relationship between self-efficacy and career intent ranges from 0.3 to 0.6 and that self-efficacy is determined by entrepreneurship education through enactive mastery, vicarious learning, verbal persuasion, and physiological arousal. The findings provide new insights into the indirect effects of entrepreneurial self-efficacy, scarce in the literature.

Implications of the study

The study validates SCT and TPB in a developing country like Uganda. Still, the research adds to the current literature on SEI determinants in emerging economies. The study advances new knowledge in education and entrepreneurship, specifically on EE's indirect effect on SEI. The study also provides practical implications to policymakers, curriculum developers, and university management in developing entrepreneurship curriculum content geared towards SEI's stimulation among learners. Educational and economic policymakers should design policies and programs like startup capital to enable graduates to realize their self-employment intentions. Because the unfriendly business environment impedes graduates from realizing their intentions.

Limitation and Future Direction

The study sample was limited to final year undergraduates. Therefore, future research can explore the nonstudents youth population's self-employment intentions to understand what informs their intentions. The study employed a cross-sectional research design. Therefore, a longitudinal approach may be used in future research to assess if entrepreneurial self-efficacy and self-employment intentions are retained or change after graduation from university. It could also be interesting to study how entrepreneurial self-efficacy and intent changes at different levels of education, right from high school, during university, and after graduation.

Funding: This research received funding from Makerere University Business School

Acknowledgments: Great thanks go to Makerere University Business School management and, in particular, the principal, Prof. Waswa Balunywa, for the funding opportunity.

Conflicts of Interest: The authors declare no conflict of interest.

References

Abdullahi, A. I., Zainol, F. A., Daud, W. N. W., & Yazid, A. S. (2017). Entrepreneurial intention Revisited: Measuring the Impact of Socio-Cultural Business Environment using Structural Equation Modeling. *World Applied Sciences Journal, 35*(8), 1445-1456.

Afolabi, M. O., Kareem, F. A., Okubanjo, I. O., Ogunbanjo, O. A., & Aninkan, O. O. (2017). Effect of Entrepreneurship Education on Self-Employment Initiatives among Nigerian Science & Technology Students. *Journal of Education and Practice, 8*(15), 44-51.

Ajzen, I. (1991a). The theory of planned behavior. *Organizational behavior and human decision processes, 50*(2), 179–211.

Ajzen, I. (1991b). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.

Ajzen, I. (2011). The theory of planned behaviour: reactions and reflections. *Taylor & Francis.

Awiti, A. O. (2016). The Uganda youth survey report.

Babetsiza, J. (2019). Development of gainful self-employment skills amongst tertiary education graduates: perceptions, expectations and experiences at Ankole Western University in Uganda. *Africa Journal of Public Sector Development and Governance, 2*(2), 96-118.
Baluku, M. M., Bantu, E., & Otto, K. (2018). Effect of Locus of Control on Entrepreneurial Attitudes and Self-Employment Intentions: The Moderating Role of Individualism. *Journal of enterprising culture, 26*(03), 251-283.

Balunywa, W., Rosa, P., Dawa, S., Namatovu, R., Kyejusa, S., & Ntamu, D. (2013). Global entrepreneurship monitor: GEM Uganda 2012 executive report: Kampala: Makerere University Business School and International Development …. 

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational behavior and human decision processes, 50*(2), 248-287.

Bandura, A. (1997). Self-self efficacy: The exercise of control: New York: Freeman.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied psychology, 51*(2), 269-290.

Bandura, A. (2005). The evolution of social cognitive theory. *Great minds in management*, 9-35.

Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2017). Entrepreneurial motivation and self-employment: evidence from expectancy theory. *International Entrepreneurship and Management Journal, 13*(4), 1097-1115.

Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics, 24*(1), 53-61.

Boukamcha, F. (2015). Impact of training on entrepreneurial intention: an interactive cognitive perspective. *European Business Review, 27*(6), 593-616.

De Noble, A., Jung, D., & Ehrlich, S. (1999). Entrepreneurial self-efficacy: the development of a measure and its relationship to entrepreneurial action (Paper). Babson Park, MA: Babson College. Document Number.

Ebewo, P. E., Rugimbana, R., & Shambare, R. (2017). Effects of Entrepreneurship Education on Students' Entrepreneurial Intentions: A Case of Botswana. *Management, 5*(4), 278-289.

Ebewo, P. E., Shambare, R., & Rugimbana, R. (2017). Entrepreneurial intentions of Tshwane University of Technology, Arts and Design students. *African Journal of Business Management, 11*(9), 175-182.

Faloye, D. O., & Olatunji, O. D. (2018). Entrepreneurship education and self-employment intentions among fresh graduates in Nigeria. *Journal of Economics and Sustainable Development, 9*(12), 146-158.

Farashah, D. A. (2013). The process of impact of entrepreneurial education and training on entrepreneurship perception and Intention: Study of educational system of Iran. *Education+ Training, 55*(8/9), 868-885.

Gall, M., Gall, J., & Borg, W. (2007). An Introduction to Educational Design Research. East, 129.

Gelaidan, H. M., & Abdullateef, A. O. (2017). Entrepreneurial intentions of business students in Malaysia: the role of self-confidence, educational and relation support. *Journal of small business and Enterprise Development, 24*(1), 54-67.

Gerba, T. D. (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.

Harinic, L. T., Sudiro, A., Rahayu, M., & Fatchan, A. (2017). Study of the Bandura's social cognitive learning theory for the entrepreneurship learning process. *Social Sciences, 6*(1), 1.

Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs, 85*(1), 4-40.

Henley, A. (2005). *From entrepreneurial aspiration to business startup: Evidence from British longitudinal data*: European Business Management School, University of Wales, Swansea.

Iglesias-Sánchez, P. P., Jambino-Maldonado, C., Velasco, A. P., & Kokash, H. (2016). Impact of entrepreneurship programmes on university students. *Education+ Training, 58*(2), 209-228.

Ismail, N., Jaffar, N., & Hooi, T. S. (2013). Using EAO model to predict the self-employment intentions among the Universities' Undergraduates in Malaysia. *International Journal of Trade, Economics and Finance, 4*(5), 282.

Joensuu, S., Viljamaa, A., Varamäki, E., & Tornikoski, E. (2013). Development of entrepreneurial Intention in higher education and the effect of gender–a latent growth curve analysis. *Education+ Training, 55*(8/9), 781-803.
Karlsson, T., & Moberg, K. (2013). Improving perceived entrepreneurial abilities through education: Exploratory testing of an entrepreneurial self efficacy scale in a pre-post setting. The International Journal of Management Education, 11(1), 1-11.

Kim-Soon, N., Ahmad, A. R., & Ibrahim, N. N. (2014). Entrepreneurial motivation and entrepreneurship career intention: Case at a Malaysian Public University. Crafting Global Competitive Economies, 2020, 1001-1011.

Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. Journal of Business Venturing, 15(5-6), 411-432.

Liguori, E. W., Bendickson, J. S., & McDowell, W. C. (2018). Revisiting entrepreneurial intentions: a social cognitive career theory approach. International Entrepreneurship and Management Journal, 14(1), 67-78.

Liñán, F. (2004). Intention-based models of entrepreneurship education. Piciolla Impresa/Small Business, 3(1), 11-35.

Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. Entrepreneurship theory and practice, 33(3), 593-617.

Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: a role for education. International Entrepreneurship and Management Journal, 7(2), 195-218.

MacKinnon, D. (2012). Introduction to statistical mediation analysis: Routledge.

Mahendra, A. M., Djatmika, E. T., & Hermawan, A. (2017). The Effect of Entrepreneurship Education on Entrepreneurial Intention Mediated by Motivation and Attitude among Management Students, State University of Malang, Indonesia. International Education Studies, 10(9), 61-69.

Majogoro, K., & Mgabo, M. R. (2012). Self-employment intention among university students: testing Ajzen's theory of planned behaviour (TPB). International Journal of Physical and Social Sciences, 2(8), 67-84.

Margahana, H., & Negara, S. T. (2019). Self efficacy, self personality and self confidence on entrepreneurial intention: study on young enterprises. Journal of Entrepreneurship Education, 22(1).

Matlay, H., Abaho, E., Olomi, D. R., & Urassa, G. C. (2015). Students' entrepreneurial self-efficacy: does the teaching method matter? Education+ Training.

Michelle, K., & Tendai, C. (2016). The association of entrepreneurship education and entrepreneurial intention among university students in the Eastern Cape province of South Africa. International Journal of Educational Sciences, 12(3), 200-211.

Miranda, F. J., Chamorro-Mera, A., & Rubio, S. (2017). Academic entrepreneurship in Spanish universities: An analysis of the determinants of entrepreneurial intention. European Research on Management and Business Economics, 23(2), 113-122.

Muharam, F. M., & Serah, A. T. (2014). The Impact of Entrepreneurship Education: An Investigation of Undergraduate Student Self-Employment Intention.

Nabi, G., & Holden, R. (2008). Graduate entrepreneurship: intentions, education and training. Education+ Training, 50(7), 545-551.

Nabi, G., Holden, R., & Walmsley, A. (2010). From student to entrepreneur: towards a model of graduate entrepreneurial career-making. Journal of Education and Work, 23(5), 389-415.

Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. Academy of Management Learning & Education, 16(2), 277-299.

Navarro-Rivera, J., & Kosmin, B. A. (2011). Surveys and questionnaires. The Routledge Handbook of Research Methods in the Study of Religion. London: Routledge, 395-420.

Ngoma, M., & Dithan Ntale, P. (2016). Psychological capital, career identity and graduate employability in Uganda: the mediating role of social capital. International Journal of Training and Development, 20(2), 124-139.

Nowiński, W., & Haddoud, M. Y. (2019). The role of inspiring role models in enhancing entrepreneurial intention. Journal of Business Research, 96, 183-193.
Nowiński, W., Haddoud, M. Y., Lančarić, D., Egerová, D., & Czeglédi, C. (2019). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education, 44*(2), 361-379.

Ntale, P., Ssempebwa, J., Musisi, B., Ngoma, M., Genza, G. M., Kimoga, J., . . . Balunywa, W. (2020). Interagency collaboration for graduate employment opportunities in Uganda. *Education+ Training, Piperopoulos, P., & Dimov, D. (2015). Burst bubbles or build steam? Entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intentions. *Journal of small business management, 53*(4), 970-985.

Puni, A., Anlesinya, A., & Korsorku, P. D. A. (2018). Entrepreneurial education, self-efficacy and intentions in Sub-Saharan Africa. *African Journal of Economic and Management Studies, 9*(4), 492-511.

Rasmussen, E. A., & Sorheim, R. (2006). Action-based entrepreneurship education. *Technovation, 26*(2), 185-194.

Schmutzler, J., Andonova, V., & Diaz-Serrano, L. (2018). How context shapes entrepreneurial self-efficacy as a driver of entrepreneurial intentions: A multilevel approach. *Entrepreneurship theory and practice, 1042258717753142.*

Shahab, Y., Chengan, Y., Arbizu, A. D., & Haider, M. J. (2019). Entrepreneurial self-efficacy and intention: do entrepreneurial creativity and education matter? *International Journal of Entrepreneurial Behavior & Research, 25*(2), 259-280.

Shinnar, R. S., Hsu, D. K., & Powell, B. C. (2014). Self-efficacy, entrepreneurial intentions, and gender: Assessing the impact of entrepreneurship education longitudinally. *The International Journal of Management Education, 12*(3), 561-570.

Shook, C. L., & Bratianu, C. (2010). Entrepreneurial intent in a transitional economy: an application of the theory of planned behavior to Romanian students. *International Entrepreneurship and Management Journal, 6*(3), 231-247.

Taherdoost, H. (2016). Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research. *International Journal of Academic Research in Management, 5*(3), 28-36.

Tharenou, P., Donohue, R., & Cooper, B. (2007). *Management research methods; Cambridge University Press.*

Vanevenhoven, J., & Liguori, E. (2013). The Impact of Entrepreneurship Education: Introducing the Entrepreneurship Education Project. *Journal of small business management, 51*(3), 315-328.

Vuorio, A. M., Puulilainen, K., & Fellnhofer, K. (2018). Drivers of entrepreneurial intentions in sustainable entrepreneurship. *International Journal of Entrepreneurial Behavior & Research, 24*(2), 359-381.

Wang, J.-H., Chang, C.-C., Yao, S.-N., & Liang, C. (2016). The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention. *Higher Education, 72*(2), 209-224.

Watson, J., Gatewood, E. J., Lewis, K., Dempsey, D., & Jennings, J. (2014). Gender and entrepreneurial self-efficacy: a learning perspective. *International Journal of Gender and Entrepreneurship.*

Welsh, D. H., Tullar, W. L., & Nemati, H. (2016). Entrepreneurship education: Process, method, or both? *Journal of Innovation and Knowledge, 1*(3), 125-132.

Wolfe, M. T., & Patel, P. C. (2018). Racing to get self-employed? Life history models and self-employment. *Journal of Business Venturing Insights, 10*, e00093.

Wu, S., & Wu, L. (2008). The impact of higher education on entrepreneurial intentions of university students in China. *Journal of small business and Enterprise Development, 15*(4), 752-774.

Yamane, T. (1973). *Statistics: An introduction analysis, 2nd Ed., New York; Harper & Row.*