Sustainability intention: mediator of sustainability behavioral control and sustainable entrepreneurship

Saadat Nakyejwe Lubowa Kimuli
Department of Entrepreneurship, Makerere University Business School, Kampala, Uganda
Laura Orobia
Makerere University Business School, Kampala, Uganda
Humphrey Muki Sabi
Information Communication Technology University, Yaounde, Cameroon, and
Clive Katiba Tsuma
Information Communication Technology, San francisco, California, USA

Received 9 December 2019
Revised 3 February 2020
Accepted 4 March 2020

Abstract

Purpose – The purpose of this paper is to report results of a study carried out to establish the mediation effect of sustainability intention in the relationship between sustainability behavioral control and sustainable entrepreneurship.

Design/methodology/approach – This study is cross sectional and correlational. Data were collected through a questionnaire survey of 384 small businesses. Data were analyzed through correlation coefficients and linear regression using Statistical Package for Social Sciences and the Medgraph program.

Findings – The results suggest that sustainability intention partially mediates the relationship between sustainability behavioral control and sustainable entrepreneurship. Results further indicate that sustainability behavioral control and sustainability intention are significant predictors of sustainable entrepreneurship.

Originality/value – This study provides an initial empirical evidence on the mediation effect of sustainability intention in the relationship between sustainability behavioral control and sustainable entrepreneurship. To the researcher's knowledge, no study had been conducted on such an interesting topic using evidence from a developing country such as Uganda.

Keywords Sustainable entrepreneurship, Sustainability intention, Sustainability behavioral control, Uganda
Paper type Research paper

1. Introduction and motivation

Sustainable entrepreneurship is a summation of social, economic and environmental entrepreneurship whereby small businesses incorporate social, economic and environmental aspects in their operations (Vuorio *et al.*, 2017; Mair and Marti, 2006; Koegh and Polonsky, 1998). Sustainable entrepreneurship is seen as a solution to the world's problems such as poverty, hunger and global warming (Dean and McMullen, 2007; Porter and Krammer, 2011) and as such has attracted the attention of academicians such as Vuorio *et al.* (2018) who conducted a study on drivers of entrepreneurial intentions in sustainable entrepreneurship using evidence from three European countries (Finland, Liechtenstein and Austria) using a questionnaire survey of University students. Vuorio *et al.* (2018) call for further studies in other national settings on sustainable entrepreneurship and in this study, we try to respond to such calls. Vuorio *et al.* (2018) found that entrepreneurial intention is associated with sustainable entrepreneurship.

Sustainable and social entrepreneurship differ from conventional entrepreneurship in terms of value creation (Vuorio *et al.*, 2018). Presently, we see social entrepreneurship and environmental entrepreneurship being added to economic entrepreneurship to form

World Journal of Entrepreneurship, Management and Sustainable Development
Vol. 16 No. 2, 2020
pp. 81-95

2042-5961
DOI 10.1108/WJEMSD-12-2019-0096

sustainable entrepreneurship. Social entrepreneurship focuses on social value creation (Seelos and Mair, 2005), while environmental entrepreneurship is about conservation of the natural environment (Koegh and Polonsky, 1998). Sustainable entrepreneurship has been claimed to combine economic, social and environmental value creation (Cohen and Winn, 2007; Dean and McMullen, 2007; Schaltegger and Wagner, 2011), and it has been seen to include both social and environmental entrepreneurship (Hockerts, 2015; Schaltegger and Wagner, 2011). In the recent times, the United Nations has come up with sustainable development goals that include; ending poverty and hunger, improving health and education, making cities more sustainable, combating climate change and protecting oceans and forest (OWG, 2014). These goals require entrepreneurs to go out in search for opportunities to create value while keeping in mind sustainable use of natural resources. Entrepreneurship is an important conduit for a more sustainable economy. Entrepreneurs pass on sustainable products, processes, and start-ups in order to solve social and environmental problems (Hall *et al.*, 2010) and this kind of process has been termed as sustainable entrepreneurship (Patzelt and Shepherd, 2011). The theory of planned behavior as suggested by Ajzen (1991) suggests that for a given behavior to be adopted, there must be intention and control of a given behavior. The implication of such is that existing and potential entrepreneurs must have sustainability intention and sustainability behavioral control in order to achieve sustainable entrepreneurship. The question is thus whether sustainability intention and sustainability behavioral control can really have a role to play in sustainable entrepreneurship.

Therefore, given that there are minimal empirical studies that have examined the mediating role of sustainability intention in the relationship between sustainability behavioral control and sustainable entrepreneurship, in this study, we try to bridge this gap. Using a questionnaire survey of 384 small businesses in Uganda, we provide an initial empirical evidence that sustainability intention partially mediates the relationship between sustainability behavioral control and sustainable entrepreneurship. Results further indicate that sustainability intention and sustainability behavioral control are significant predictors of sustainable entrepreneurship.

The findings of this study are thus important in many ways. This study provides an initial empirical literature on the mediating effect of sustainability intention in the relationship between sustainability behavioral control and sustainable entrepreneurship. This study results also responds partly to a call made by Vuorio *et al.* (2018) regarding further studies in other national settings. The existing entrepreneurs can also think of sustainable entrepreneurship using this study results. From the results of this study, economic entrepreneurship alone may not be sufficient to solve the current world problems of poverty, hunger and environmental degradation and this implies that Governments through their ministries of trade can emphasize entrepreneurs to include in their plans and operations social and environmental entrepreneurship.

The rest of the paper is organized as follows. The next section is literature review where the theoretical foundation and empirical literature are discussed. In this section, research hypotheses are also formulated after reviewing the existing literature. This section is then followed by methodology. The next section is results and finally, summary and conclusion.

2. Literature review

2.1 Theoretical foundation

This study is based on the theory of planned behaviour (Ajzen, 1991). This theory arose as an extension of the theory of reasoned action (TRA) by (Fishbein and Ajzen, 1975), on the ground that TRA failed to explain behaviours that are not under volitional control. The main underpinning of the TPB is that complete volitional control is rare, certain behaviours require special knowledge, skills and resources. Thus, TPB views an individual's behaviour as

mainly directed by behavioural intention, which in turn is explained by a person's attitude towards the behaviour, subjective norms and perceived behavioural control (Ajzen, 1991). The behavioural intention is the immediate antecedent of performing any behaviour of interest. An individual's interest to perform any behaviour is largely inclined by whether people view it in a positive way (Ajzen, 1991). The general principle of the TPB is that the intention to perform is strongest when individuals hold positive attitudes towards the behaviour, there is a strong subjective norm to perform the behaviour and there is a high level of perceived behaviour control (Ajzen and Fishbein, 2004).

TPB indicates that people go through a conscious and deliberative decision-making process based on careful consideration of available information before engaging in a given behaviour. As such, it assumes that people are rational decision makers whose behavioural intention is influenced jointly by attitude towards the behaviour, subjective norms and perceived behavioural control. In addition, when people have preconceived notions of their personal ability in terms of resources and capacity to achieve specific objective, this perception will play a major role in their behaviour directly and/or indirectly through attitude. In this study, behavioural intention and perceived behavioural control are used to explain sustainable entrepreneurship among small businesses in Uganda. Behavioural intention refers to an individual's subjective probability that he will perform a specified behaviour of interest (Ajzen, 1991). The stronger the readiness to act, the more likely it is to perform the actual behaviour. Testing behavioural intentions are appropriate for examining people's likelihood to act (Ajzen and Fishbein, 2004). In this study, behavioural intention is viewed as sustainability intention. The study predicts sustainable entrepreneurship in a "live" setting and therefore it is appropriate to include sustainability intention of small business owners in predicting their willingness to undertake sustainable entrepreneurial actions in their businesses. Perceived behavioural control reflects beliefs about whether or not the individual has the resources and capacity to act on a given behaviour (Ajzen, 1991). This is measured by two items; perceived control (sustainability knowledge) and perceived ability (how easy or difficult).

2.2 Sustainability behavioral control and sustainable entrepreneurship

Sustainability entrepreneurship is critical in the business sector in the recent times (Belz and Binder, 2017). According to Shevchenko *et al.* (2016) external stakeholders require firms to practice sustainability though this is largely influenced by competences. Thus, sustainability knowledge and self-efficacy enable entrepreneurs to share and communicate in their marketing campaigns sustainability practices to consumers in both small and large scale businesses (Raderbauer, 2011). Hence, the willingness of entrepreneurs to use sustainability knowledge in terms of proper communication about their products and services in the sustainability transition enhance their growth (Hörisch, 2015). Literature further indicates that prior exposure to sustainability practices motivates entrepreneurs to follow their goal of sustainable enterprises in order to solve environmental and societal problems (Bell and Stellingwerf, 2012). Lack of knowledge and customers perceptions are the main challenges affecting sustainable entrepreneurs (Bell and Stellingwerf, 2012). In other words, sustainability may lead to entrepreneurial opportunities using their knowledge of the businesses and self-efficacy. Small business owners need knowledge to identify opportunities from the environment. However, little is known on whether sustainability knowledge influences identification of sustainable entrepreneurial opportunities. We posit that,

H1. Sustainability behaviour control and sustainability entrepreneurship are positively related.

2.3 Sustainability intention, sustainability behavioral control and sustainable entrepreneurship

Behaviour control is the measure of an individual's ability to perform planned action (Remeikiene *et al.*, 2013). In other words, it's an individual's view of how easy they can perform a task (Kautonen *et al.*, 2011). In this study, sustainability behavioural control is defined as the knowledge and ability in adopting and implementing sustainability practices. A combination of Self-efficacy and sustainability knowledge may influence the intention to perform sustainable entrepreneurship (Mcgee *et al.*, 2009; Shepherd and Patzelt, 2011). Therefore, if sustainability behavioural control is high, then sustainable intention will most likely be high. According to Shevchenko *et al.* (2016) sustainability is largely influenced by competences. These competences include; knowledge and self-efficacy. Knowledge involves having the awareness or information to adopt and implement sustainability practice. On the other hand, self-efficacy is the entrepreneur's belief about his ability to act. Thus, small business owners need to be aware of what and how sustainability can be adopted and implemented confidently. Furthermore, sustainability behavioural control is more likely to influence the entrepreneur's intention in adopting sustainability (Baden and Prasad, 2016). Sustainability behavioral control in terms of sustainability knowledge and self-efficacy play an important role in recognizing sustainable entrepreneurship opportunities since it enhances the intention for the practice (Patzelt and Shepherd, 2011). In addition, sustainable entrepreneurs promote innovation in terms of new products, services, processes, markets basing on their sustainability knowledge and intention in influencing customers; this eventually leads entrepreneurs to practice sustainable entrepreneurship (Bell, 2012). Existing literature suggests that small business owners-managers make important decisions in creating sustainable opportunities, growth of the business, general running of the businesses and meeting stakeholder needs (Koe *et al.*, 2014). Therefore, small business owner-managers are willing to adopt sustainable practices for their businesses.

Despite their willingness, little is known on whether their intention and knowledge of the social and environmental aspects affects their intention to adopt sustainable entrepreneurship. According to Hooi *et al.* (2016), drivers of sustainable entrepreneurship include government regulation and international environmental protection which affect decision of small business owner's adoption of sustainability practices. This in turn benefits small business's economic performance, society's wellbeing and environment's resilience. Thus, these scholars recommended testing intention as a mediating factor in explaining sustainable entrepreneurship especially in developing countries where sustainable development is an emerging challenge. We posit that,

H2. Sustainability intention and sustainable entrepreneurship are positively related

H3. Sustainability intention mediates the relationship between sustainability behavioral control and sustainability entrepreneurship.

3. Methodology

3.1 Research design

The study employed a cross sectional and correlational research design. This study's population was 108,534 small businesses in Kampala (UBOS, 2012) from which a sample of 384 small businesses was selected using a rotary method of selecting the subjects. Of the 384 small businesses, completed questionnaires were received from 358 small business owners indicating a response rate of 93%. The high response rate was possible because of the face to face interaction between the researcher and the respondents, and maintaining of regular contact with respondents during data collection. This study's unit of analysis was the small

businesses and the unit of inquiry was the small business owners or managers. The study revealed that majority of the respondents were female (52%), and the majority were in the 29–39 years age bracket (38%), followed by those in the 18–28 years age group (28%), clearly indicating that on average, those in business are below 40 years old. In addition, majority of the respondents had either a diploma or bachelors (27%). This is followed by masters' holders (20%), indicating that the respondents were knowledgeable as far as the issues under study are concerned. On another hand, majority of the small business owners and managers had obtained training on sustainability concerns (53%) while 47% had never obtained any form of training on sustainability concerns. The results further show that the majority of the businesses were between 2–5 years old (55%). This is followed by those that have been around for a period between 6–10 years (30%). Thus, indicating that most of the businesses were fairly new.

3.2 The questionnaire and variables measurement

A questionnaire using six point Likert scale ranging from Very often to Never was designed and used to collect the data by measuring the opinion of a respondents. We utilized a face to face administration of questionnaire to enable interaction between the researcher and the respondents, and to improve the quality of responses as well as response rate. The questionnaire design was based on reviewing extant literature on sustainability intention, sustainability behavioural control and sustainable entrepreneurship. Sustainability intention was operationalized as the likelihood of the individual to take up sustainability actions (Fishbein and Ajzen, 1975; Gruzd *et al.*, 2012). Sustainability behavioural control was viewed as the knowledge and ability in adopting and implementing sustainability practices, measured in terms of Self-efficacy and sustainability knowledge (Mcgee *et al.*, 2009; Shepherd and Patzelt, 2011). Sustainable entrepreneurship was viewed as a concept that endeavours to balance the economic, social and environmental aspects (Shepherd and Patzelt, 2011).

3.3 Validity and reliability

We use factor analysis, Cronbach alpha coefficient and content validity index to test for the validity and reliability of the research instrument. The content validity index (CVI) was computed and found a CVI of 0.80. Cronbach's alpha coefficient was measured to test reliability of how closely related a set of items are as group and the Cronbach alpha values for all the study variables were above 0.7 which is acceptable (Nunnally, 1978). We employed exploratory factor analysis to reduce the data to a manageable size (see Tables 1–3 for factor analysis results).

4. Results

4.1 Descriptive statistics

Means and standard deviations were generated to summarize the observed data. These are presented in Table 4. The statistics show that the mean rating for the dependent variable - Sustainable entrepreneurship is 4.09 with a maximum of 6.00 and minimum of 1.00. This implies that sustainable entrepreneurship is not yet fully embraced among Uganda's entrepreneurs. The existence of a minimum score of 1.00 implies that there are firms that completely have no idea or not have any thing regarding sustainable entrepreneurship while the existence of a maximum score of 5 means that there are firms that have adopted sustainable entrepreneurship. For the independent variables (sustainability intention and sustainability behavioral control), the mean for sustainability intention is 4.78 with a minimum score of 2.83 and a maximum score

Item	Component 1	2	3
Review and up-date plans to reduce and to recycle wastes	0.818		
Develop a management plan to support the production of quality products/ services	0.787		
Routinely undertake sample analysis to improve the quality of products/services	0.711		
Write environmental and sustainability policy	0.593		
Give credit to someone who goes out of their way to improve the performance of our business		0.903	
Give constructive feedback to employees about their performance		0.895	
Monitor the profitability of the products/services			0.901
Have a cash flow forecast for both this year and next year			0.877
Eigen value	3.147	1.446	1.127
% of variance	39.33	18.07	12.48
Cumulative %	39.33	57.40	71.49
Kaiser – Meyer- Olkin Measure of sampling Adequacy	0.648		
Approx. chi-square	447.623		
Df	28		
Bartlett's Test of Sphericity (Sig)	0.000		
Determinant	0.046		
Average communalities	0.715		

Table 1.
Rotated Component Matrix for Sustainable entrepreneurship

Item	Component 1	2
I am confident that I can deal efficiently with unexpected events	0.875	
It is easy for me to stick to my aims and accomplish the goals	0.830	
I can always manage to solve difficult problems if I try hard enough	0.817	
I can remain calm when facing difficulties	0.804	
Potential sources of soil, air and water pollution		0.844
Effects of overfishing on fish stock level		0.788
Sustaining nature for example Earth, biodiversity and ecosystem		0.768
Effects of deforestation on animal habitats, climate change and soil lose		0.617
Eigen value	3.806	1.601
% of variance	47	20.01
Cumulative %	47.5	67.587
Kaiser – Meyer- Olkin Measure of sampling Adequacy	0.787	
Approx. chi-square	562.396	
Df	28	
Bartlett's Test of Sphericity Sig	0.000	
Determinant	0.423	
Average communalities	0.676	

Table 2.
Rotated Component Matrix for Sustainability behavioral control

of 6. The mean for sustainability behavioral control is 4.54 while the minimum score is 2.13 and the maximum score is 6. The standard deviations are small as compared to the means especially for the independent variables and this implies that the calculated means highly represent the observed data (Field, 2009; Saunders *et al.*, 2007).

4.2 Correlation analysis

Results in Table 5 indicate that sustainability behavioral control is positively and significantly related to Sustainability Intention ($r = 0.536^{**}$, $p < 0.05$). This implies that a

Item	Component 1
. . .develop a clear, well defined marketing strategy	0.938
. . .look for new ideas for new products	0.938
Eigen value	1.76
% of variance	87.99
Cumulative %	87.99
Kaiser – Meyer- Olkin Measure of sampling Adequacy	0.500
Approx. chi-square	127.076
Bartlett's Test of Sphericity Df	1
Sig	0.000
Determinant	0.423
Average communalities	0.880

Table 3.
Rotated component matrix for sustainability intention

positive change in sustainability behavioral control helps to improve sustainability intention of owners of small businesses. Study results also revealed that sustainability intention is positively and significantly related to Sustainable intention ($r = 0.509^{**}$, $p < 0.05$). This implies that a positive change in sustainability intention enhance the adoption of sustainable entrepreneurship of owners of small businesses. Preliminarily, H1 and H2 are supported.

4.3 Regression analysis

Results in Table 6 show that Sustainability Intention and Sustainability Behavior Control predict 33% of the changes in Sustainable Entrepreneurship ($R^2 = 0.334$) and thus H1 and H2 are fully supported. Sustainability Behavior Control significantly predicts Sustainable Entrepreneurship ($\beta = 0.326$, $p = 0.000$). Results also show that Sustainable Intention significantly predicts Sustainable Entrepreneurship ($\beta = 0.334$, $p = 0.000$).

4.4 Mediation test results

This study's main purpose was to establish the mediation effect of sustainability intention in the relationship between sustainability behavioral control and sustainable entrepreneurship. Mediation tests were thus conducted to be sure that the conditions suggested by Baron and Kenny (1986) are met. According to Baron and Kenny (1986) and Kenny *et al.* (1998), mediation occurs if the following conditions are met:

(1) Variations in the independent variable significantly account for variance in the presumed mediator;

(2) Variations in the mediator significantly account for variance in the dependent variable;

(3) Variations in the independent variable significantly account for variance in the dependent variable;

(4) The effect of the independent variable on the dependent variable significantly reduces when the mediator is included in the equation.

Baron and Kenny's (1986) mediation path analysis as shown in Figure 1 revealed the following:

(1) There was a significant direct effect of sustainability behavioral control and sustainability intention (Beta = 0.581; $p < 0.05$).

Table 4.
Descriptive statistics

	n	Min	Max	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Sustainability intention	384	2.83	6.00	4.7861	0.76485	0.585	−0.571	0.134	−0.653	0.267
Sustainable entrepreneurship	384	1.00	6.00	4.0949	1.08251	1.172	−0.356	0.134	−0.154	0.267
Sustainability behavioral control	384	2.13	6.00	4.5489	0.85027	0.723	−0.826	0.134	−0.102	0.267

(2) There was a significant direct effect of sustainability intention and sustainable entrepreneurship (Beta = 0.354; $p < 0.05$).

(3) There was a significant direct effect of sustainability behavioral control and sustainable entrepreneurship (Beta = 0.374; $p < 0.05$).

(4) When controlling for sustainability intention, the direct effect of sustainability behavioral control reduced from Beta = 0.505 to Beta = 0.326 but remained significant. This is an indication that the relationship between sustainability behavioral control and sustainable entrepreneurship is partially mediated by sustainability intention.

5. Discussion

According to the current study results, sustainability intention mediates the relationship between sustainability behavioral control and sustainable entrepreneurship. When knowledge and self-efficacy are considered together as behaviour control, the study finding provide evidence in support of the theoretical assertion by Ajzen (1991) that behaviour is determined by control beliefs about the power of both situational and internal factors that prohibit or facilitate performance of the given behaviour. Therefore, this study provides empirical evidence supporting the fact that a clearer understanding of sustainability intention in small businesses can be developed through investigating sustainability behavioral control. The results on the role of sustainability behavioral control as far as sustainable entrepreneurship is concerned show that first, sustainability behaviour control and sustainability entrepreneurship are directly related. Second, this relationship can be realized through intention toward sustainable entrepreneurship, thus providing support for hypothesis H3. The results mean that the specific pathway by which the relationship between sustainability behavioral control and sustainable entrepreneurship occurs is direct, although intention takes away part of the contribution. This illustrates that, when intention towards sustainable entrepreneurship is strong, it takes away some of the direct contribution in the causal pathway of sustainable behavioral control and sustainable entrepreneurship. In this case, intention acts as a conduit and since it takes priority in sustainable entrepreneurship, one cannot split intention from sustainable entrepreneurship. Indeed, sustainability behavioral control and intention are both true drivers of sustainable entrepreneurship in small businesses.

While there is no extant empirical support in the sustainable entrepreneurship literature, this finding links well with the TPB (Ajzen, 1991) which argues that, when people perceive constraints of intended behaviour, perceived behaviour control (in this case sustainability behavioural control), could help to explain the behaviour in question. However, when intention is strong, perceived behaviour control may have little direct effect on actual behaviour, because part of the effect is translated into intention. However, bearing in mind the fact that management in small businesses revolves around the individual, he/she may have the knowledge and self-efficacy, but the ultimate choice of action will depend on whether

Variable	1	2	3
Sustainable Intention (1)	1		
Sustainable Entrepreneurship (2)	0.509**	1	
Sustainability Behavior Control (3)	0.536**	0.505**	1

Note(s): **Correlation is significant at the 0.01 level (2-tailed)

Table 5.
Correlation analysis results

Table 6.
Regression analysis results

Variable		Unstandardized coefficients		Standardized Coefficients	t	Sig	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	0.905	0.270		3.359	0.001			
	Sustainability Behavior Control	0.374	0.061	0.326	6.113	0.000	0.505	0.319	0.275
	Sustainable Intention	0.354	0.056	0.334	6.278	0.000	0.509	0.327	0.282

$R = 0.578$, $R^2 = 0.334$, Adjusted $R^2 = 0.330$

Effective Size measures		
Standardised Coefficients		R^2 Measures (Variance)
Total:	**0.505**	**0.255**
Direct:	**0.326**	**0.075**
Indirect:	**0.179**	**0.179**
Indirect to Total ratio	**0.354**	**0.703**

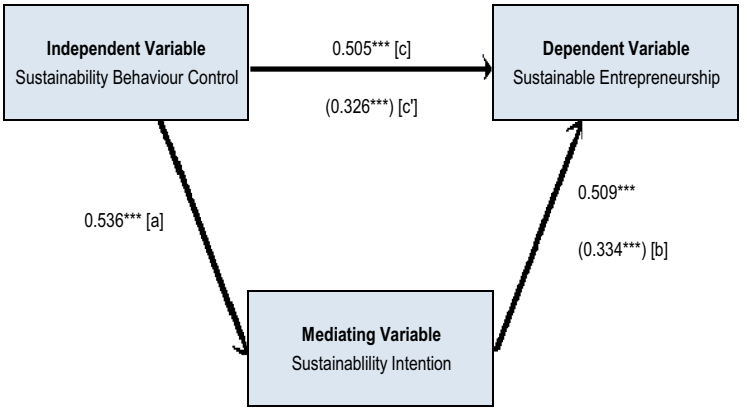

Figure 1.
Medggraph results

individual has plans or intends to put measures in place. Past sustainable entrepreneurship studies involving the association between Sustainability knowledge, capability and behaviour have preferred to investigate the direct links. For instance, Koe *et al.* (2014) investigated the direct links and established significant association between perceived ability, sustainability knowledge, sustainability intention and sustainable entrepreneurship. This study therefore, adds to our understanding that intention toward sustainable entrepreneurship is a mediator in the relationship between sustainability behavioural control and sustainable entrepreneurship behaviour in small businesses.

One of the factors that may be attributed to the positive relationship between sustainability intention and sustainable entrepreneurship is the background knowledge obtained through trainings on sustainable entrepreneurship. The descriptive statistics revealed that majority of the respondents (53%) had obtained training on sustainability concerns. In addition, about 27% of the respondents had a diploma or bachelor's degree, signifying some basic knowledge on sustainability concerns. This means that the respondents had some basic idea on sustainable entrepreneurship action. This knowledge in turn boosts their intention to see that such actions as integrating economic, social and environmental motives in business pursuits are undertaken. However, it is worth noting that during the data collection process, it was discovered that some business owners had plans/measures in place to conserve the environment, deal with social challenges as they went about achieving their profit motive. For instance, it was discovered that some businesses' main objective was to make products (bags, mats, wall hangings, etc) using polythene bags littered within and around their communities. This can only be explained by their sustainability intentions. They definitely knew that one way of conserving the environment is to remove the rubbish littered around. To them, what others see as rubbish, they saw as a business opportunity.

Sustainability knowledge helps them involve other stakeholders in minding the communities' social and environment aspects. In addition, there is likelihood to engage in

routine check-ups just to ensure, the business does not make profits at the expense of the social and environment concerns. This is translated into developing plans for supporting local community-based activities and employ people from the local community. Furthermore, sustainability knowledge results into the use of improved technologies for instance, technologies that take into account energy saving and waste management, thereby leading to the production of high quality products. The study findings confirm the study of Soo Sung and Park (2018), who reported that sustainability orientation has a positive relationship with intention related to sustainability. This indicates that small business owner/managers who are knowledgeable have a strong sustainability orientation, which in turns propels them into making plans for incorporating environmental and social issues in pursuing their profit motives.

6. Summary and conclusion

The study revealed that sustainability intention mediates the relationship between sustainability behaviour control and sustainable entrepreneurship. Therefore, the direct relationship between sustainability behaviour control and sustainability entrepreneurship is best explained through the mediation of sustainability intention. This illustrates that, when sustainability intention towards sustainable entrepreneurship is strong, it takes away some of the direct contribution in the causal pathway of sustainability behavioural control and sustainable entrepreneurship. In this case, sustainability intention acts as a conduit and since it takes priority in sustainable entrepreneurship, one cannot disconnect sustainability intention from sustainable entrepreneurship. Indeed sustainability behavioural control and sustainability intention are both true drivers of sustainable entrepreneurship in small businesses. Hence, small business owners' intention may not be separated from sustainability behaviour control in undertaking sustainable entrepreneurship.

Further, this study demonstrated that sustainability behavioural control is critical for sustainable entrepreneurship. Though this did not have the direct path, the mediation of intention certainly supported the need for knowledge on sustainability practices. The implication therefore is that intention of sustainable entrepreneurship improves when the individual possesses the sustainability knowledge. Sustainability knowledge represents the knowledge of the sustainability aspects like social, economic and environmental aspects. This means that, if we are to see improvement in owner managers' knowledge towards sustainable entrepreneurship, there is need for training and capacity building programs specifically on sustainability aspects for owner-managers.

Like any other study, this study also has limitations which we discuss alongside areas for future research. The results of this study should then be interpreted with caution. This study employed a quantitative survey and given its limitations in terms of freedom to the respondents in expressing their views, it is important that future studies could employ a mixed methods design or a qualitative research approach to identify other factors that can explain sustainable entrepreneurship. This study was conducted in Uganda, a developing African Country with a number of tribes and cultures. It is unclear whether results of this study can be generalized in other countries. It is thus important to have studies on the same topic in other national settings. Nevertheless, this study results are important and useful in understanding sustainable entrepreneurship.

References

Ajzen, I. and Fishbein, M. (2004), "Questions raised by a reasoned action approach: comment on Ogden (2003)", *Health Psychology*, Vol. 23 No. 4, pp. 431-434.

Ajzen, I. (1991), "The theory of planned behavior", *Orgnizational Behavior and Human Decision Processes*, Vol. 50, pp. 179-211.

Baden, D. and Prasad, S. (2016), "Applying behavioural theory to the challenge of sustainable development: using hairdressers as diffusers of more sustainable hair-care practices", *Journal of Business Ethics*, Vol. 133 No. 2, pp. 335-349.

Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-1182.

Bell and Stellingwerf (2012), "Sustainable entrepreneurship: the motivations and challenges of sustainable entrepreneurs in the renewable energy industry", Master's Thesis, Jönköping International Business School, Jönköping, Sweden.

Belz, F.M. and Binder, J.K. (2017), "Sustainable entrepreneurship: a convergent process model", *Business Strategy and the Environment*, Vol. 26 No. 1, pp. 1-17.

Cohen, B. and Winn, M.I. (2007), "Market imperfections, opportunity and sustainable entrepreneurship", *Journal of Business Venturing*, Vol. 22 No. 1, pp. 29-49.

Dean, T.J. and McMullen, J.S. (2007), "Toward a theory of sustainable entrepreneurship: reducing environmental degradation through entrepreneurial action", *Journal of Business Venturing*, Vol. 22 No. 1, pp. 50-76.

Field, A. (2009), *Discovering Statistics Using SPSS*, Sage publications, London.

Fishbein, M. and Ajzen, I. (1975), "Strategies of change-active participation", in *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*, available at: http://people.umass.edu/aizen/fanda1975.html (acessed 26 July 2017).

Gruzd, A., Staves, K. and Wilk, A. (2012), "Connected scholars: examining the role of social media in research practices of faculty using the UTAUT model", *Computers in Human Behavior*, Vol. 28 No. 6, pp. 2340-2350.

Hall, J.J.K., Daneke, G.A.G. and Lenox, M.J.M.M.J. (2010), "Sustainable development and entrepreneurship: past contributions and future directions", *Journal of Business Venturing*, Vol. 25 No. 5, pp. 439-448.

Hockerts, K. (2015), "Determinants of social entrepreneurial intentions", *Entrepreneurship Theory and Practice*, Vol. 41 No. 1, pp. 105-130.

Hooi, H.C., Ahmad, N.H., Amran, A. and Rahman, S.A. (2016), "The functional role of entrepreneurial orientation and entrepreneurial bricolage in ensuring sustainable entrepreneurship", *Management Research Review*, Vol. 39 No. 12, pp. 1616-1638.

Hörisch, J. (2015), "The role of sustainable entrepreneurship in sustainability transitions: a conceptual synthesis against the background of the multi-level perspective", *Administrative Sciences*, Vol. 5 No. 4, pp. 286-300.

Kautonen, T., Tornikoski, E.T. and Kibler, E. (2011), "Entrepreneurial intentions in the third age: the impact of perceived age norms", *Small Business Economics*, Vol. 37 No. 2, pp. 219-234.

Kenny, D.A., Kashy, D. and Bolger, N. (1998), "Data analysis in social psychology", in Gilbert, D., Fiske, S. and Lindzey, G. (Eds), *Handbook of Social Psychology*, 4th ed., McGraw-Hill, New York, pp. 233-265.

Koe, Omar, R. and Majid, I.A. (2014), "Factors associated with propensity for sustainable entrepreneurship", *4Th International Conference on Marketing and Retailing*, 2013, Vol. 130, pp. 65-74.

Koegh, P.D. and Polonsky, M.J. (1998), "Environmental commitment: a basis for environmental entrepreneurship?", *Journal of Organizational Change Management*, Vol. 11 No. 1, pp. 38-49.

Mair, J. and Marti, I. (2006), "Social entrepreneurship research: a source of explanation, prediction, and delight", *Journal of World Business*, Vol. 41 No. 1, pp. 36-44.

Mcgee, J.E., Peterson, M., Mueller, S.L. and Sequeira, J.M. (2009), "Entrepreneurial self-efficacy: refining the measure", *Entrepreneurship: Theory and Practice*, Vol. 33 No. 4, pp. 965-988.

Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York.

OWG, U. (2014), "Introduction to the proposal of the open working group for the sustainable. development goals", Outcome document as of 19.6.2014 (online), available at: http://sustainabledevelopment.un.org/.

Patzelt, H. and Shepherd, D.A. (2011), "Recognizing opportunities for sustainable development", *Entrepreneurship: Theory and Practice*, Vol. 35 No. 4, pp. 631-652.

Porter, M.E. and Kramer, M.R. (2011), "Creating shared value", *Harvard Business Review*, Vol. 89 Nos 1/2, pp. 62-77.

Raderbauer, M. (2011), *The Importance of Sustainable Business Practices in the Viennese Accommodation*, Industry Submitted by, (September).

Remeikiene, R., Startiene, G. and Dumciuviene, D. (2013), "Explaining entrepreneurial intention of university Students : the role of entrepreneurial education", *Managemement, Knowledge and Learning*, Vol. 2, pp. 299-307.

Saunders, M., Lewis, P. and Thornhill, A. (2007), *Research Methods for Business Students*, FT/Prentice-Hall, London.

Schaltegger, S. and Wagner, M. (2011), "Sustainable entrepreneurship and sustainability innovation: categories and interactions", *Business Strategy and the Environment*, Vol. 20 No. 4, pp. 222-237.

Seelos, C. and Mair, J. (2005), "Social entrepreneurship: creating new business models to serve the poor", *Business Horizons*, Vol. 48 No. 3, pp. 241-246.

Shepherd, D.A. and Patzelt, H. (2011), "The new field of sustainable entrepreneurship: studying entrepreneurial action linking what is to Be sustained with what is to Be developed", *Entrepreneurship: Theory and Practice*, Vol. 35 No. 1, pp. 137-163.

Shevchenko, A., Lévesque, M. and Pagell, M. (2016), "Why firms delay reaching true sustainability", *Journal of Management Studies*, Vol. 53 No. 5, pp. 911-935.

Sung, C.S. and Park, J.Y. (2018), "Sustainability orientation and entrepreneurship orientation: is there a tradeoff relationship between them?", *Sustainability*, Vol. 10 No. 2, p. 379.

UBOS (2012), *Uganda Bureau of Statistics*, 2012 Statistical Abstract, Uganda Bureau of Statistics, Kampala, Uganda.

Vuorio, A.M., Puumalainen, K. and Fellnhofer, K. (2018), "Drivers of entrepreneurial intentions in sustainable entrepreneurship", *International Journal of Entrepreneurial Behavior and Research*, Vol. 24 No. 2, pp. 359-381.

Further reading

Binder, J.K. and Belz, F.M. (2018), "Sustainable entrepreneurship: what it is", *Handbook of Entrepreneurship and Sustainable Development Research*, pp. 30-72.

Choongo, P., Van Burg, E., Paas, L.J. and Masurel, E. (2016), "Factors influencing the identification of sustainable opportunities by SMEs: empirical Evidence from Zambia", *Sustainability*, Vol. 8 No. 1, pp. 1-24.

Crals, E. and Vereeck, L. (2005), "The affordability of sustainable entrepreneurship certification for SMEs", *The International Journal of Sustainable Development and World Ecology*, Vol. 12 No. 2, pp. 173-183.

Kuckertz, A. and Wagner, M. (2010), "The influence of sustainability orientation on entrepreneurial intentions-investigating the role of business experience", *Journal of Business Venturing*, Vol. 25 No. 5, pp. 524-539.

Legates, D.R. and McCabe, G.J. Jr (2005), "Evaluating the use of "goodness of fit" measures in hydrologic and hydroclimatic model validation", *Water Resources Research*, Vol. 35 No. 1, pp. 233-241.

Majid, I.A., Latif, A. and Koe, W.L. (2017), "SMEs' intention towards sustainable entrepreneurship", *European Journal of Multidisciplinary Studies*", Vol. 4 No. 3, pp. 24-32.

Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, 3rd ed., McGraw- Hill, New York.

World Commission (1987), "World commission on environment and development", Our Common Future; from One Earth to One World, Brundtland Report of World Commission on Environment and Development.

Zahra, S.A., Gedajlovic, E., Neubaum, D.O. and Shulman, J.M. (2009), "A typology of social entrepreneurs: motives, search processes and ethical challenges", *Journal of Business Venturing,* Vol. 24 No. 5, pp. 519-532.

Zain, Z.M., Akram, A.M. and Ghani, E.K. (2010), "Entrepreneurship intention among Malaysian business students", *Canadian Social Science*, Vol. 6 No. 3, pp. 34-44.

Zhao, H., Seibert, S.E. and Hills, G.E. (2005), "The mediating role of self-efficacy in the development of entrepreneurial intentions", *Journal of Applied Psychology*, Vol. 90 No. 6, pp. 1265-1272.

Corresponding author
Saadat Nakyejwe Lubowa Kimuli can be contacted at: ksaadah@mubs.ac.ug