Sendawula, Kasimu; Kisubi, Moses Kisame; Najjinda, Shamirah; Nantale, Hanifah; Kabbera, Samuel

Article

The efficacy of entrepreneurial networking and innovation in fostering the performance of small businesses in Uganda

Journal of Innovation and Entrepreneurship

Provided in Cooperation with:
Springer Nature

Suggested Citation: Sendawula, Kasimu; Kisubi, Moses Kisame; Najjinda, Shamirah; Nantale, Hanifah; Kabbera, Samuel (2023) : The efficacy of entrepreneurial networking and innovation in fostering the performance of small businesses in Uganda, Journal of Innovation and Entrepreneurship, ISSN 2192-5372, Springer, Heidelberg, Vol. 12, Iss. 1, pp. 1-18, https://doi.org/10.1186/s13731-023-00358-0

This Version is available at:
https://hdl.handle.net/10419/290291

Journal of Innovation and Entrepreneurship

RESEARCH Open Access

The efficacy of entrepreneurial networking and innovation in fostering the performance of small businesses in Uganda

Kasimu Sendawula[1*], Moses Kisame Kisubi[2], Shamirah Najjinda[3], Hanifah Nantale[1] and Samuel Kabbera[1]

*Correspondence:
sendawulakasimu@gmail.com

[1] Department of Marketing and Management, Makerere University, Kampala, Uganda
[2] Department of Accounting and Finance, Makerere University Business School, Jinja, Uganda
[3] Department of Hotel and Institutional Catering, Kyambogo University, Kampala, Uganda

Abstract

The purpose of this study was to investigate the efficacy of entrepreneurial networking and innovation in fostering the performance of small businesses using evidence from Uganda. The study was cross-sectional and correlational. Data were collected through a self-administered questionnaire survey of 368 small businesses and analyzed through correlation, hierarchical regression, and mediation analysis using the Statistical Package for Social Sciences (SPSS). Study findings indicate that entrepreneurial networking and innovation are significant predictors of small business performance. Results also indicate that innovation partially mediates the relationship between entrepreneurial networking and the performance of small businesses. As such, this study contributes to the extant literature on the performance of small businesses as it provides initial empirical evidence on the efficacy of entrepreneurial networking and innovation in fostering the performance of small businesses. It further contributes to the recent literature on the mediation effect of innovation using evidence from Uganda.

Keywords: Entrepreneurial networking, Innovation, Small business, Performance, Uganda

Introduction

Globally, the performance of small businesses is acknowledged as a key driver to inclusive and sustainable economic growth. Performance entails the achievement of the firm's goals and objectives in line with the set performance standards such as profitability, market share, and cost minimization (Harash et al., 2014). As such, Turyakira et al. (2019) indicate that with improved performance, small businesses make a substantial contribution to employment opportunities, innovation, resource usage, income distribution, and the generation of revenue for governments in both developed and developing economies. This has drawn the attention of policymakers and academicians, who have advocated for further research on small businesses (see: Adomako et al., 2016; Sandada et al., 2014). The call for further research presents the need for the small business fraternity to develop strategies that catalyze their performance (Sendawula et al., 2021a).

Currently, the performance of small businesses in most developing countries is undesirable (National Planning Authority, 2020). Specifically, 65.7% of the small businesses in the four main commercial districts of Uganda (Kampala, Wakiso, Mukono, and Jinja) are non-profitable (Mayanja, 2020). Similarly, the majority of small businesses in trading, service, and hospitality are more likely to lose 20–30% of their total revenue (UN Capital Development Fund, 2020). This explains why more than 50% of these businesses in Uganda are more likely to operate below the poverty line or close their operation during the current volatile, uncertain, complex, and ambiguous (VUCA) economic conditions (UN Capital Development Fund, 2020). This implies that if the current trend continues, it could lead to the liquidation of several small businesses in Uganda. As such, there is an urgent need to explore feasible strategies to restore small business performance in order to promote inclusive and sustainable growth in Uganda's economy.

Existing literature presents several theories to explicate strategies that can be undertaken to foster small business performance. These include; the resource-based view theory (Hart, 1995), the dynamic capability theory (Teece et al., 1997), the networking theory (Johanson & Mattsson, 1988), resource dependence theory (Pfeffer & Salancik, 1978) and the Schumpeterian theory (Schumpeter, 1942). However, we adopted the networking and the Schumpeterian theories to appreciate the efficacy of entrepreneurial networking and innovation in fostering small business performance in Uganda. By nature of small businesses in terms of resource constraints, we found it prudent to use these theories since small businesses rely on both informal and formal networks, to access resources, develop or improve on their processes and products as means to boost their performances. Furthermore, the theories better hypothesize the relationship between networking, innovation and firm outcomes like performance.

Specifically, the networking theory, as developed by Johanson and Mattsson (1988), suggests that entrepreneurial networking catalyzes small business performance. Abu-Rumman et al. (2021) describe entrepreneurial networking as the process through which entrepreneurs interact either formally or informally with the goal of assisting one another in their business endeavors. Through these associations, small businesses establish formal and informal ties with customers, suppliers, financial institutions, and other players to get the support necessary for business performance (Sendawula et al., 2021b). As such, entrepreneurial networks have emerged as a vital strategy for small firms to access resources, especially in the developing world where formal institutions are reluctant to deal with them (Anwar & Ali Shah, 2020). Through these networks, small businesses access, attract and acquire valuable resources which are pertinent to their performance (Ribeiro et al., 2021). With the informality nature of most of the small businesses (Struwig et al., 2019), they capitalize on informal networks to acquire customers as well as transact with other stakeholders like suppliers, creditors which enhances their performance (Cárdenas, 2021). The networking abilities of a small business owner/manager are a precursor to winning business contracts, customer loyalty, and improving on their internal processes.

Networks not only help small businesses function better, but they also stimulate innovation, which leads to higher performance. Through networks, owners can get business opportunities, skills, and knowledge that are vital in unlocking the innovative potential of small businesses to foster their performance as postulated by the Schumpeterian

theory (Schumpeter, 1942). The theory argues that attaining high performance levels among small businesses calls for innovation that will enable them to respond to changing customer needs (Schumpeter, 1942). Innovation is the process of incremental or radical change in the firms' products, services, market, processes or organization setup in terms of methods and structure of a firm (Kahn, 2018). Empirically, innovation has been positively associated to small business performance (Hanelt et al., 2021; Ramadani et al., 2019). As such, for any business to attain superior performance, innovation is critical. As the business environment becomes more volatile (Hanelt et al., 2021), entrepreneurs need to adjust their practices by becoming more innovative (Guerrero-Villegas et al., 2018), otherwise their businesses will become obsolete (Zhang et al., 2019). Therefore, for businesses to remain competitive there is a need to satisfy unmet customer needs through innovation.

Upon that backdrop, it is arguably patent that entrepreneurial networking and innovation potentially boost the performance of small businesses. However, there is very scanty literature regarding the mediating effect of innovation in the association between entrepreneurial networking and small business performance. Even then, while there are considerable efforts to understand small business's performance challenges as explicated by entrepreneurial networking in the small business fraternity, most strands of this research have focused mainly on the global north. Thus, this study undertakes to explore this phenomenon by highlighting holistic and contextual aspects from a developing economy perspective. Therefore, scholars and practitioners will get a thorough understanding of the importance of improving their entrepreneurial networks which will catalyze their innovative potential in order to produce new or significantly improved products and services that are vital in enhancing their performance.

Theoretical foundation and hypothesis development

In this study, both the networking and Schumpeterian theories were adopted to explore the strategies that can be undertaken by small businesses in Uganda to improve their performance. As such, the networking theory suggests that small businesses can register improved performance through their networks operationalized as entrepreneurial networking (Johanson & Mattsson, 1988). Entrepreneurial networks consist of parties that small business owners-managers are directly connected to as well as people they are indirectly connected to through other people (Aladejebi, 2020). Centeno and Carmichael (2014) add that entrepreneurial networks are collaborative formal or informal relationships formed by business owner-managers with their social, business, and institutional contacts in order to gain access to resources that are relevant to fostering the performance of their businesses. It is therefore imperative to note that, through their networks, business owner-managers appreciate the contemporary needs of the market and, by addressing them, small businesses are able to attract and retain customers to support business engagements (Engel et al., 2017).

It is also argued that in their networks, small businesses are in position to develop innovations that can spur their performance, as postulated by the Schumpeterian theory. Schumpeter (1942) indicates that small businesses need to develop new or significantly improved products and services to satisfy customers' needs if they are to catalyze their performance. This is achieved through a process known as "creative destruction",

in which something new, like products, markets, processes, and organizations, brings about the end of whatever came before it (Kraehe, 2019; Langroodi, 2021). Thus, Schumpeter argues that attaining high performance levels among small businesses calls for innovation that will enable them to respond to the changing customer needs.

Small business performance

There is no consensus among scholars on the perception of a small business globally. As such, small businesses are defined differently in different continents, countries and industries. In the Ugandan context, a small business is a firm that employs between 5–49 people with total assets and capital of Uganda shillings of 10–100 million (Ministry of Trade Industries and Cooperatives—MTIC, 2015). In Uganda, most businesses 90% are still small (Kisubi et al., 2022) and contribute to approximately 90% of Uganda's employment, enhancing innovation, income distribution, resource utilization, and generation of government revenue (UBOS, 2021), 20% to the GDP (Uganda Revenue Authority, 2019) and 80% of the manufactured products (Kisubi et al., 2022).

Given the contribution of small businesses to the Ugandan economy, their performance in terms of learning and growth, internal processes, and customer retention is critically important, according to Marimuthu et al. (2009), performance indicates the extent to which a business effectively utilizes its assets to realize more profits. Performance is further viewed as the achievement of the firm's goals and objectives in line with the set performance standards such as profitability, market share, and cost minimization (Harash et al., 2014). In this study, performance is viewed as the ability of the small business to develop strategies that foster the achievement of set goals that are operational in nature. Small business performance can be viewed in terms of financial and non-financial measurements (Cho et al., 2019). Due to the lack of reliable financial records by most small businesses in Uganda (MTIC, 2015), underpinned by financial illiteracy on the part of business owners/managers or corrupt intentions of financial record keepers or intentionally underreporting their financial performance indicators to avoid tax (Ribeiro et al., 2021), we measured performance in terms of non-financial indicators that include learning and growth, internal processes, and customer retention (Sebikari, 2014).

Entrepreneurial networking and small business performance

Entrepreneurial networking is the foundation stone for the performance of small businesses all over the world (Anwar & Ali Shah, 2020). The networks could be both formal and informal through which small businesses generate resources that are patent to their performance (Mayanja et al., 2019). As business managers or owners establish social ties with both internal and external stakeholders, firm trust increases, and this subsequently advances knowledge sharing and increases the possibility for better firm performance (Abu-Rumman et al., 2021). The interconnectedness of small firms with other institutions and individuals in the form of collaborations, social contacts, and partnerships facilitates knowledge exchange, redesigns traditional practices, and improves services, which ultimately improves performance (Cárdenas, 2021).

Small businesses utilize both their formal and informal networks to acquire resources (Mayanja et al., 2019), grow their markets (Zheng et al., 2020), as well as transact with other stakeholders like suppliers and creditors, which boosts their performance (Surangi,

2018). Several scholars (Abu-Rumman et al., 2021; Anwar & Ali Shah, 2020; Pratono, 2018) have investigated the relationship between business networking and firm performance. However, concrete evidence is still missing in the literature as contrasting findings are reported. For instance, positive results (Al-Omoush et al., 2022; Pratono, 2018; Wang & Chung, 2020) and negative findings (Abu-Rumman et al., 2021; Ribeiro et al., 2021) have been reported in past literature. Therefore, a debate exists in the literature as to which types of networks yield benefits to firm performance. We, therefore, focused on entrepreneurial networks and hypothesized that:

H1: There is a significant relationship between entrepreneurial networking and the performance of small businesses.

Innovation and performance of small businesses

The concept of innovation has attracted the attention of several scholars and there seems to be no agreement on what innovation entails. Generally, innovation is viewed as the introduction of new or significantly improved products, organizational methods, marketing strategies and processes that add value to the organization (Rexhäuser & Rammer, 2014). Innovation entails several types that can be process, product, marketing and new business model (Decker & Günther, 2017). Thus, process innovation is new or significantly improved ways of fostering productivity as well as quality in an organization. Product innovation is the introduction of new or improved products that meet the ever-changing customer needs. Marketing innovation on the other hand are new strategies of undertaking the marketing mix of an organization like the use of social media, websites, and other technologies to foster marketing campaigns.

Recent literature indicates that innovation and small business performance are positively related. Accordingly, Anwar (2018) reported that innovation in form of process, market and organization is critical in enhancing the performance of firms. This suggests that small businesses that are innovative register higher performance levels as compared to their non-innovative counterparts. Udriyah et al. (2019) also indicate that market orientation and innovation positively affect competitive advantage and business performance. On the contrary, Ebrahimi et al. (2018) reveal that organizational innovation and learning orientation have no effect on SME performance. Additionally, resource constraints, lack of exposure, risk aversion, limited research, and poor rewarding culture among SMEs as compared to large firms which impede their ability to innovate and attain greater performance (Struwig et al., 2019). The foregoing discussion indicates that innovation affects small business performance. Thus, it can be hypothesized that,

H2: There is a significant relationship between innovation and the performance of small businesses.

Mediation role of innovation

Basing on the Schumpeterian and network theories, business owner-managers need to establish entrepreneurial networks in order to understand the business environment so as to develop new or significantly improved innovations that are relevant for business performance (Schumpeter, 1942). As such, we view innovation as the immediate outcome of entrepreneurial networks. That is, through entrepreneurial networks, owners can get business opportunities, skills, and knowledge that are vital in unlocking the

innovative potential of small businesses to foster their performance as postulated by the Schumpeterian theory (Schumpeter, 1942). In fact, these social ties give business managers/owners an opportunity to discuss ideas, share thoughts, and get exposed by visiting other innovative firms.

Through vicarious learning, they are able to come up with new strategies like new or improved products, services, processes, organizations (Bakas et al., 2019) and marketing strategies that help small businesses to register high performance (Hilmersson & Hilmersson, 2021). Therefore, entrepreneurial networking generates more value to businesses where the networks are geared toward developing an innovative culture or accessing resources to commercialize an innovation (Ha et al., 2022; Zhang et al., 2019). Entrepreneurial networks entail establishing both short- and long-term relationships with other stakeholders (Abu-Rumman et al., 2021). These entrepreneurial ties enable small businesses to understand customer needs (Zheng et al., 2020) in order to develop new or significantly improved products or services that enhance small business performance (Cárdenas, 2021). Thus, innovations are conduits through which entrepreneurial networks foster small business performance.

According to Mayanja et al. (2019), innovation itself is not an end but a means through which its antecedents impact its outcomes. Consequently, according to Aboelmaged (2014), innovation mediates the relationship between knowledge management capability and operational performance. Anning-Dorson (2018) also indicates that innovation mediates the association between involvement capability and the performance of service firms. It is also noted that integrating organizational, product, and process innovation mediates organizational performance and flexibility (Camison & Lo pez, 2010).

Likewise, this study postulates that innovation can mediate the relationship between entrepreneurial networking and small business performance. This is because innovation makes firms more flexible after understanding the business environment in which they operate so as to register high performance. Thus, small business owners need to be more flexible if they are to innovate and develop appropriate networks that will translate into improved performance. Due to the lack of evidence on the mediating effect of innovation in the relationship between entrepreneurial networking, and small buisness performance. We based on the foregoing review of related extant literature to hypothesize that:

H3: Innovation significantly mediates the relationship between entrepreneurial networking and performance of small businesses.

Research methodology

Research design, population, and sample

The study was cross-sectional and correlational. The study population was 108,534 small businesses, from which a sample of 383 small businesses was drawn from the membership of Uganda's small-scale industries association (USSIA), determined using the Raosoft sampling size calculator. Small businesses from all regions of the country were sampled to ensure that the study results are a representative of the study population. We used stratified simple random sampling since it controls sectoral specifics that may impact small business performance (Rahman et al., 2022). Specifically, small businesses were stratified into three subsectors that were the manufacturing, trade and hotel & restaurants. As such, to get the sample per stratum, we divided the population per category

by the total population and multiplied by the total sample. Thereafter, a lottery approach of simple random sampling was used to select the final respondents without replacement as indicated in Table 1. The unit of analysis was the small businesses and the unit of inquiry on the other hand was the business manager or owner for businesses that are owner-managed. Thus, every small business was represented by a manager or owner. A response rate of 96% was attained. The high response rate is attributed to the physical distribution of the tools to the managers, phone call follows ups (after 4 days), data collection skills, and experience possessed by the researcher and the research assistants.

The questionnaire, validity, reliability and operationalization of study variables

A self-administered questionnaire with closed ended questions in English was used to collect data. The Questionnaire was anchored on a 5-point Likert scale ranging from strongly disagree (1), disagree (2) not sure (3), agree (4) to strongly agree (5). This was intended to measure the extent to which the respondents were agreeing or disagreeing with the study items. The instrument was physically distributed to the respondents (business managers). Before the final survey, a pre-test was conducted to establish the validity and reliability of the questionnaire. Pre-test results revealed that all study variables had a content validity index (CVI) and Cronbach's alpha coefficient above the cutoff point of 0.7 (Nunnally, 1978), suggesting that the tool was valid and reliable. We operationalized small business performance in terms of learning and growth, internal processes, and customer retention (Chong, 2008), entrepreneurial networking is measured in terms of trust, coordination, and information sharing (Wincent et al., 2013) and innovation is operationalized in terms of structural, product and process innovation (Jacobs & Brand, 2007).

Common methods bias

Since the study adopted a questionnaire to collect data, we controlled for common methods bias that normally affects questionnaire-based results in social sciences (Gorrell et al., 2011). This was achieved by following Padsakoff et al. (2003)'s recommendations and as such; we ensured that the dependent and independent variables were not similar in content, assured the respondents (business managers) that there were no right or wrong answers, avoided double-barreled questions and most importantly, we engaged business managers as the unit of inquiry since they are considered to be more knowledgeable about entrepreneurial networking, innovation and performance of their businesses.

Table 1 Sample size distribution per sector. Source: Uganda Small Scale Industries Association (USSIA)

Business sector	Population	Sample size
Trade	81,000	287
Hotel and restaurant	17,109	61
Manufacturing sector	10,426	37
Total	108,534	384

Test for parametric assumptions

We tested for the assumptions of normality, homogeneity, multicollinearity to establish the distribution of the collected data (Hair et al., 2014). Skewness and kurtosis were adopted to check if the data set is normally distributed to be able to defend the choice of analysis and to enable generalizability of findings. Our results indicate that the distribution is moderately skewed and thus normal distribution of the data. The Kurtosis values on the other hand for all the variables were within the range of ± 2.5 also implying normal distribution. For homogeneity of variance, we performed Levene's test to verify whether the variance was equal across the sample and the results revealed non-significant ($P > 0.05$), suggesting that the data were drawn from a sample of equal variance. Finally, multicollinearity was tested to establish whether there was a high inter-correlation between the study variables by using tolerance values and variance inflation factor (VIF). The tolerance values for all study variables were above 0.1 and the VIF was below 10 implying that there were no threats of multicollinearity (Field, 2009).

Study results

Business characteristics

In understanding the features of the small businesses investigated, data on their legal form, age, and nature of business undertaken were captured, as presented in Table 2. Specifically, the study revealed that the majority of small businesses investigated were sole proprietorship types of businesses (48%). This was followed by the partnership form of business (38%). This indicates that most small businesses in Uganda are established by one individual, who is helped by mostly family members to ensure the efficient and effective running of the business. For the age of the investigated small businesses, our results indicate that most businesses have been in operation for less than 5 years (47%). This was followed by those that have spent between 5 and 10 years in operation (37%), suggesting that most of the small businesses in Uganda do not survive long in operation because businesses that have been in operation for over 10 years are only 60 (16%) out

Table 2 Business characteristics. Source: Primary data

Business age	Frequency	Percent
Less than 5 years	172	47
5–10 years	136	37
Over 10 years	60	16
Total	368	100
Legal form of business		
Sole proprietorship	178	48
Partnership	138	38
Limited liability	52	14
Total	368	100
Nature of the business		
Trade	220	60
Manufacturing	110	30
Hotel and restaurant	38	10
Total	368	100

of the 368 small businesses investigated. As such, the government needs to put in place a conducive business environment to enhance the performance and success of small businesses in Uganda, given their contribution to the growth and development of the country. Concerning the nature of the small businesses, we found that most of the ones investigated were trading (60%). This is followed by those in manufacturing at 30%. This is explained by the fact that entrepreneurs in Uganda find it easy to start and operate trading businesses as compared to manufacturing and hotel and restaurant businesses. Based on our implicit knowledge of the study context and engagement with the business owners, we noted that starting a trading business is easier with very few legal procedures, requires less capital, is simple to manage, and can be run by one person, thus justifying why they are the majority in Uganda.

Sample characteristics

The results in Table 3 indicate that 58% of the respondents were female and only 42% were male suggesting that the majority of small businesses in Uganda are managed by females as compared to males. Concerning the age bracket, results indicate that 51% of the respondents are in the age bracket of 25–29, 30–34 (19%), 18% in 18–24, 10% in 34–39, and 2% in 40 and above. This suggests that most of the small business managers in Uganda are still in their youthful age. They have the potential to establish local and international relationships that can unlock the innovative potential of their enterprises in order to catalyze small business performance. This is attributed to the fact that Uganda's

Table 3 Characteristics of the respondents. Source: Primary data

Item	Frequency	Percentage
Gender		
Male	153	42
Female	215	58
Total	368	100
Age bracket of the respondents		
18–24	68	18
25–29	187	51
30–34	69	19
34–39	35	10
40 & above	9	2
Total	368	100
Level of education		
Certificate	13	4
Diploma	22	6
Bachelor	193	52
Masters	136	37
PhD	4	1
Total	368	100
Marital status		
Single	136	37
Married	219	60
Widowed	13	4
Total	368	100

population is mainly dominated by the youths (77%) who are actively involved in operating small businesses. Regarding the education level of the respondents, the study reveals that most of the respondents have degrees (52%), followed by 37% with a master's degree implying that small business owners currently employ workers with the required skills and competencies needed to enhance the performance of their businesses. Lastly, study results indicate that the majority of the respondents are married (60%), with 47% being single and only 4% being widowed, suggesting that most managers of small businesses in Uganda get support from their spouses that can be financial and emotional in nature to ensure that business activities are well undertaken for better business performance.

Descriptive statistics

We present descriptive statistics for the study variables in Table 4. With respect to the dependent variable which is small business performance, we note that the mean is 3.39 and the standard deviation is 0.53. The means and standard deviations for entrepreneurial networking and innovation are 3.85 and 4.0462, 0.78 and 0.89, respectively. According to Field (2009), mean and standard deviation represent a summary of the data while standard deviations show how well the means represent the data. The goal is to decide if the statistical means match the observed results well (Field, 2009). As such, results indicate that the standard deviations are small as compared to the means and this implies that calculated means highly represent the observed data (Field, 2009).

Correlation analysis results

We present our Pearson correlation results in Table 5. Results indicate that there is a significant positive relationship between entrepreneurial networking and the performance of small businesses ($r = 0.604^{**}$, $P < 0.01$). This shows that a positive change in entrepreneurial networking translates into a positive change in small business performance and thus H1 is supported. Study results further indicate that there is a significant positive association between innovation and small business performance ($r = 0.631^{**}$, $P < 0.01$), implying that a positive change in innovation results into a positive change in the performance of small businesses and hence providing initial support for H2.

Table 4 Descriptive statistics. Source: Primary data

Items	*N*	Min	Max	Mean	SD
Customer retention	368	1.00	4.50	3.1814	0.59984
Internal process	368	1.00	5.00	3.3222	0.74219
Learning and growth	368	1.17	5.00	3.6590	0.69959
Performance	368	1.06	4.79	3.3875	0.53487
Trust	368	1.14	5.00	3.9138	0.77511
Coordination	368	1.00	5.00	3.6217	0.97788
Information sharing	368	1.00	5.00	4.0111	0.81125
Entrepreneurial networking	368	1.05	5.00	3.8489	0.78002
Structural innovation	368	1.00	5.00	3.9586	0.80771
Product innovation	368	1.00	5.00	4.0543	0.72411
Process innovation	368	1.00	5.00	4.0462	0.86578
Innovation	368	1.00	5.00	4.0197	0.72408

Table 5 Correlational results

Study variables	1	2	3	4	5	6	7	8	9	10	11	12
Trust (1)	1											
Coordination (2)	0.628**	1										
Information sharing (3)	0.839**	0.790**	1									
Networking (4)	0.885**	0.900**	0.955**	1								
Structural innovation (5)	0.733**	0.632**	0.795**	0.783**	1							
Product innovation1 (6)	0.697**	0.582**	0.727**	0.726**	0.754**	1						
Process innovation (7)	0.751**	0.436**	0.705**	0.675**	0.722**	0.718**	1					
Innovation (8)	0.804**	0.603**	0.819**	0.702**	0.911**	0.900**	0.906**	1				
Customer satisfaction (9)	0.423**	0.388**	0.463**	0.463**	0.565**	0.528**	0.320**	0.514**	1			
Internal process (10)	0.314**	0.424**	0.437**	0.433**	0.506**	0.410**	0.250**	0.424**	0.500**	1		
Learning and growth (11)	0.557**	0.365**	0.555**	0.529**	0.507**	0.549**	0.467**	0.558**	0.482**	0.312**	1	
Performance (12)	0.546**	0.500**	0.617**	0.604**	0.666**	0.626**	0.439**	0.631**	0.816**	0.786**	0.761**	1

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

Regression analysis results

Since correlation analysis results provide preliminary support for the study hypothesis, regression was further performed to confirm our hypothesis and to establish the explanatory power of the independent variable on the dependent variable as indicated in Table 6.

In Model I, the control variables were regressed against small business performance. Results in Table 6 indicate that business age and business form ($\beta = 0.095$, $P \geq 0.05$) and ($\beta = -0.066$, $P \geq 0.05$), respectively, have an insignificant contribution in explaining the performance of small businesses. The model accounts for 1.5% of the change in the performance of small businesses in Uganda. In Model II, entrepreneurial networking was introduced in the equation. Study findings indicate that entrepreneurial networking predicts 35.5% of the variance in small business performance. This shows that a change in entrepreneurial networking translates into 0.598 change in the performance of small businesses. As such, entrepreneurial networking is a significant predictor of business performance ($\beta = 0.598$, $P \leq 0.01$) thus validating H1. In Model III innovation was added to the equation. The results in Table 6 indicate that innovation contributes 5.8% change in the performance of small businesses in Uganda. Thus, for a unit change in innovation, business performance would improve by 0.406 units. The results show that innovation is a significant antecedent of small business performance ($\beta = 0.406$, $P \leq 0.01$) hence confirming H2 of the study. Finally, the variables entered in the regression model explain an overall 42.3% of the changes in the small business performance. This means that 57.7% is explicated by other variables not considered in the current study.

Mediation results

In understanding the mediating role of innovation in the relationship between entrepreneurial networking and small business performance, Dr. Jose Paul (2013)'s approach was used to undertake this and the findings are presented with the help of two models:

Table 6 Regression results

Item	Model I	Model II	Model III
Constant	3.351	1.762	1.401
Control variables			
Business age	0.095	0.065	0.057
Business form	−0.066	−0.027	−0.011
Independent variables			
Entrepreneurial networking		0.598**	0.274**
Innovation			0.406**
Model summary			
R	0.124	0.609	0.655
R-square	0.015	0.370	0.429
Adjusted *R*-square	0.010	0.365	0.423
R-square change	0.015	0.355	0.058
Model *F*	2.869	71.383	68.153
Sig	0.058	0.000	0.000
Durbin–Watson			0.832

Dependent variable; performance: **Significant at the 0.01 level

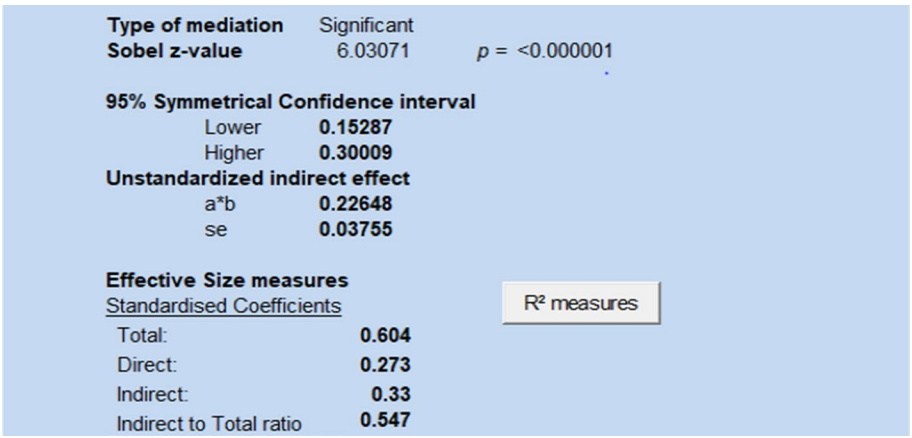

Fig. 1 The mediation effect of innovation

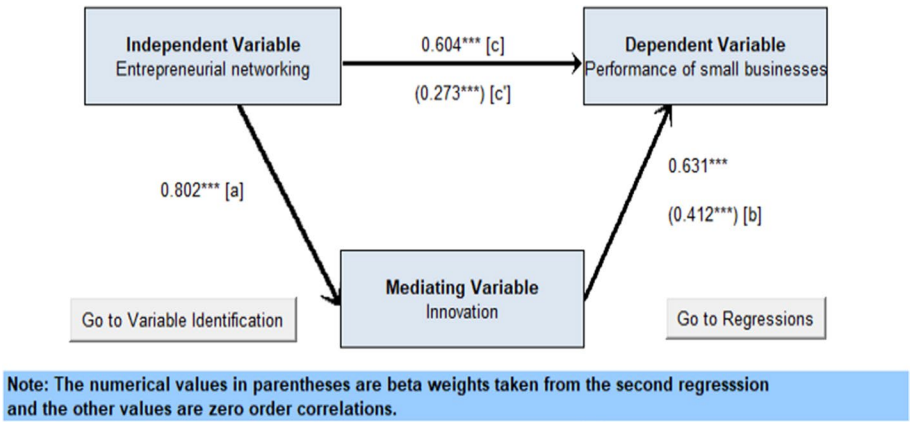

Fig. 2 Mediation effect

(a) entrepreneurial networking is a significant predictor of innovation; (b) the predictive effect of entrepreneurial networking and innovation on small business performance were run simultaneously considering the part correlations that come with the regression model. As such, regression coefficients were used and entered into the Medgraph software.

The Sobel z-value included indicates that the mediation is significant ($P<0.01$). Regarding the Sobel z-value of 6.03071 and the presence of both a direct and indirect effect values that are 0.273 and 0.33, respectively, it is concluded that innovation mediates the relationship between entrepreneurial networking and performance of small businesses. In Figs. 1 and 2, when innovation was introduced in the association between entrepreneurial networking and the performance of small businesses, the standardized beta (β) for the association reduced from (β) = 0.604 to (β) = 0.273, this indicates that innovation mediates entrepreneurial networking and performance of small businesses. However, given that the correlation did not reduce to zero, it indicates that there is a partial mediation effect. A ratio index that is (indirect effect/total effect) 54.7% given by (0.33/0.604*100) was calculated (Figs. 1 and 2). This implies that 54.7% of the effect of entrepreneurial networking on the performance of small business goes through

innovation, while the 45.3% is a direct effect. As such, innovation reduces the strength of the association between entrepreneurial networking and performance of small businesses. Thus, H3 is supported.

Discussion and conclusion

In line with *H1,* the study revealed that entrepreneurial networking is a significant predictor of small business performance. This indicates that a positive change in entrepreneurial networking translates into a positive change in business performance. As such, when small business managers develop trust through entrepreneurial ties, share knowledge, and ensure proper coordination of all stakeholders, the performance of small businesses is positively affected in terms of customer retention, improved internal processes, and effective learning among employees. This finding suggests that small business managers need to more carefully consider and undertake entrepreneurial networking initiatives in order to enhance the performance of their businesses. In addition, small business owners and managers should take deliberate actions that are aimed at enhancing their current and future networks. Specifically, business owners and managers should attend both local and international conferences, workshops, seminars, and trainings, as well as share their business cards with different stakeholders with the goal of enhancing their performance.

Our findings are consistent with Hilmersson and Hilmersson (2021) who reported that firm innovation in terms of product, process, structure, and organization is dependent on the networking capabilities of that firm. Further, it is argued that firms that are entreprneurially networked, are more innovative than their counterparts. Similarly, Ribeiro et al. (2021) revealed that women entrepreneurs' networks are positively associated with the firm performance of the business in Ghana and Nigeria. It can be argued that creating strong ties with external agencies enables firms to acquire more resources that are necessary for better performance. In line with Mayanja et al. (2019) assertion entrepreneurial networking is key to the success and sustainability of small and medium enterprises. They further claim that through these networks, firms attain beneficial information, social support, and physical resources that enable them to attain their goals. In their qualitative study catalyzing artisan entrepreneur networks in rural Portugal as a basis to enhance creative tourism.

Regarding *H2*, our results demonstrate that innovation significantly predicts small business performance, suggesting that a positive change in innovation results in a positive change in the performance of small businesses. Thus, innovation in terms of new or significantly improved products, structures, processes, markets, and organizations is all positively associated with the performance of small businesses. In particular, when small businesses develop innovative products that address the changing needs of their customers, they will be attracted and retained in the long run. This reduced the customer acquisition costs revolving around undertaking sale promotion, advertising, and conducting market surveys. In the same vein, when small businesses initiate and implement improvements in their internal operating system by integrating information and communication technology and using the internet for internal and external communication, they eliminate certain activities as well as merge other irrelevant activities. This reduces operational costs, which translate into improved performance.

It is also important to note that the small business fraternity innovates and reengineers their strictures through developing feasible strategies to meet their goals, creating and reviewing the functions of each unit, and reviewing performance plans, which will enhance efficiency and effectiveness in executing business activities that will eventually promote small business performance in terms of customer satisfaction and improved internal processes and systems. Our findings agree with Anwar's (2018), who reported that innovation in the form of process, market, and organization is critical to enhancing the performance of firms. Udriyah et al. (2019) also indicated that market orientation and innovation positively affect competitive advantage and business performance. On the contrary, our results disagree with those of Ebrahimi et al. (2018), who reveal that organizational innovation and learning orientation have no effect on SME performance. Additionally, resource constraints, lack of exposure, risk aversion, limited research, and a poor reward culture among SMEs as compared to large firms impede their ability to innovate and attain greater performance (Struwig et al., 2019).

Study findings further support *H3* by indicating that innovation partially mediates the relationship between entrepreneurial networking and small business performance. First, this finding implies that entrepreneurial networking and the performance of small businesses are directly related. Second, the relationship can be achieved through innovation. This finding demonstrates that the specific pathways by which the relationship between entrepreneurial networking and the performance of small businesses occurs are direct. However, innovation takes away part of the contribution. Hence, small business managers need to create networks with the aim of innovating, through which high performance in small businesses is realized. As such, when innovations in terms of new or significantly improved products, services, processes, and structures are developed, they take away part of the direct contribution of the causal pathway of entrepreneurial networking and performance of small businesses. In this respect, innovation practices act as a conduit, and since they take priority over small business performance, one cannot split innovation from the performance of small businesses.

The study findings are in agreement with Camison and Lo´pez (2010), who reported that performance and flexibility of the organization are mediated by integrating organizational, product, and process innovation. Mpando and Sandada (2015) also reported that innovation significantly mediates the relationship between networking and performance. This suggests that innovations have to be given priority if entrepreneurial networks are to promote firm performance. Aboelmaged (2014) further indicated that innovation performance mediates the relationship between knowledge management capability and operations performance. This is further supported by Anning-Dorson (2018), who established the mediating role of innovation in the association between involvement capability and performance of service firms.

In a nutshell, this study aimed at establishing the contribution of entrepreneurial networking and innovation on the performance of small businesses. This was realized through a questionnaire survey of 384 small businesses where business managers were considered for this study as the respondents. Results suggest that entrepreneurial networking and innovation significantly predict small business performance. Results also demonstrate that innovation partially mediates the relationship between entrepreneurial networking and small business performance.

This study makes several contributions to academics, policy and the business community. The study contributes to extant literature by providing novel evidence on the contribution of entrepreneurial networking and innovation on the performance of small businesses using evidence from a developing country. The study also reveals that innovation mediates the relationship between entrepreneurial networking and small business performance. Thus, policy makers and small business managers may need to establish both formal and informal networks with different stakeholders to enable them access resources that are relevant to enhance performance of their businesses. It is also vital that innovation in form of new or significantly improved products, processes, organizations and marketing are developed frequently to enable small businesses meet the ever-changing customer needs in order to boost their performance. Finally, society must acknowledge the fact that they should join small businesses that provide essential goods and services in fostering their entrepreneurial networks and innovation for better performance.

This study like any other study also has limitations. Thus, the study explains 42.5% of the variance in the performance of small businesses, implying that there are other factors explaining small business performance. Future studies could explore other antecedents of small business performance both in Uganda and outside Uganda. Similarly, the study focused on non-financial performance of small businesses due to the unreliability of the business' financial records, thus researchers can focus on financial performance indicators as well as how better these businesses can organize their financial records. Nevertheless, this research provides novel empirical evidence on the contribution of entrepreneurial networking and innovation on the performance of small businesses using evidence from Uganda's small business sector.

Abbreviations

CVI	Content validity index
MTIC	Ministry of Trade Industries and Cooperatives
SMEs	Small and medium enterprises
SPSS	Statistical Package for Social Sciences
UBOS	Uganda Bureau of Statistics
USSIA	Uganda Small Scale Industries Association
VUCA	Volatility, Uncertainty, Complexity, and Ambiguity

Acknowledgements
None.

Author contributions
All authors participated in the conceptualization of this study. KS was in charge of material preparation, data collection, and analysis. MKK and SN authored the initial draft of the manuscript, and all authors provided feedback on earlier versions. All authors read the final manuscript and gave their approval.

Funding
No funding.

Availability of data and materials
Data will be provided on request.

Declarations

Competing interests
The authors declare no conflict of interest.

Received: 15 September 2022 Accepted: 13 December 2023
Published online: 18 December 2023

References

Aboelmaged, M. G. (2014). Linking operations performance to knowledge management capability: The mediating role of innovation performance. *Production Planning & Control, 25*(1), 44–58.

Abu-Rumman, A., Al Shraah, A., Al-Madi, F., & Alfalah, T. (2021). Entrepreneurial networks, entrepreneurial orientation, and performance of small and medium enterprises: Are dynamic capabilities the missing link? *Journal of Innovation and Entrepreneurship, 10*(1), 1–16.

Adomako, S., Danso, A., & Ofori Damoah, J. (2016). The moderating influence of financial literacy on the relationship between access to finance and firm growth in Ghana. *Venture Capital, 18*(1), 43–61.

Aladejebi, O. (2020). The impact of entrepreneurial networks on the performance of small business in Nigeria. *Archives of Business Research, 8*(3), 281–293.

Al-Omoush, K. S., Ribeiro-Navarrete, S., Lassala, C., & Skare, M. (2022). Networking and knowledge creation: Social capital and collaborative innovation in responding to the COVID-19 crisis. *Journal of Innovation & Knowledge, 7*(2), 100181.

Anning-Dorson, T. (2018). Customer involvement capability and service firm performance: The mediating role of innovation. *Journal of Business Research, 86*, 269–280.

Anwar, M. (2018). Business model innovation and SMEs performance—Does competitive advantage mediate? *International Journal of Innovation Management, 22*(7), 1850057.

Anwar, M., & Ali Shah, S. Z. (2020). Managerial networking and business model innovation: Empirical study of new ventures in an emerging economy. *Journal of Small Business & Entrepreneurship, 32*(3), 265–286.

Bakas, F. E., Duxbury, N., & Vinagre de Castro, T. (2019). Creative tourism: Catalysing artisan entrepreneur networks in rural Portugal. *International Journal of Entrepreneurial Behavior & Research, 25*(4), 731–752.

Camison, C., & López, A. V. (2010). An examination of the relationship between manufacturing flexibility and firm performance. *International Journal of Operations & Production Management, 30*, 853–878.

Cárdenas, J. (2021). Networking for innovation: An analysis of research on social networks, social capital, and innovation. *International Review of Sociology, 31*(3), 392–409.

Centeno, M., & Carmichael, D. W. (2014). Network connectivity in epilepsy: Resting state fMRI and EEG–fMRI contributions. *Frontiers in Neurology, 5*, 93.

Cho, M., Ibrahim, S., & Yan, Y. (2019). "The use of nonfinancial performance measures in CEO bonus compensation. *Corporate Governance: An International Review, 27*(4), 301–316.

Chong, H. G. (2008). Measuring performance of small-and-medium sized enterprises: The grounded theory approach. *Journal of Business and Public Affairs, 2*(1), 1–10.

Decker, C., & Günther, C. (2017). The impact of family ownership on innovation: Evidence from the German machine tool industry. *Small Business Economics, 48*(1), 199–212.

Ebrahimi, P., Shafiee, B., Gholampour, A., & Yousefi, L. (2018). Impact of organizational innovation, learning orientation and entrepreneurship on SME performance: The moderating role of market turbulence and ICT. *Competitiveness in emerging markets* (pp. 447–480). Springer.

Engel, Y., Kaandorp, M., & Elfring, T. (2017). Toward a dynamic process model of entrepreneurial networking under uncertainty. *Journal of Business Venturing, 32*(1), 35–51.

Field, A. (2009). *Discovering Statistics using SPSS* (3rd ed.). Sage.

Gorrell, G., Ford, N., Madden, A., Holdridge, P., & Eaglestone, B. (2011). Countering methods bias in questionnaire-based user studies. *Journal of Documentation, 67*(3), 507–524.

Guerrero-Villegas, J., Sierra-García, L., & Palacios-Florencio, B. (2018). The role of sustainable development and innovation on firm performance. *Corporate Social Responsibility and Environmental Management, 25*(6), 1350–1362.

Ha, L. T., Thang, D. N., & Thanh, T. T. (2022). Effects of R&D, networking and leadership roles on environmental innovation adoption in Vietnam's SMEs. *Economic Research-Ekonomska Istraživanja, 35*(1), 1211–1242.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling*. Sage.

Hanelt, A., Firk, S., Hildebrandt, B., & Kolbe, L. M. (2021). Digital M&A, digital innovation, and firm performance: An empirical investigation. *European Journal of Information Systems, 30*(1), 3–26.

Harash, E., Al-Timimi, S., & Alsaadi, J. (2014). The influence of finance on performance of small and medium enterprises (SMES). *Technology, 4*(3), 161–167.

Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review, 20*(4), 986–1014.

Hilmersson, F. P., & Hilmersson, M. (2021). Networking to accelerate the pace of SME innovations. *Journal of Innovation & Knowledge, 6*(1), 43–49.

Jacobs, D. F. M. F., & Brand, J. (2007). *Adding values: The cultural side of innovation*. ArtEZ Press.

Johanson, J., & Mattsson, L. G. (1988). Internationalisation in industrial systems–a network approach. In N. Hood & J. E. Vahlne (Eds.), *Strategies in global competition* (pp. 287–314). Croom Helm.

Jose, P. E. (2013). *Doing statistical mediation and moderation*. Guilford Press.

Kahn, K. B. (2018). Understanding innovation. *Business Horizons, 61*(3), 453–460.

Kisubi, M. K., Aruo, F., Wakibi, A., Mukyala, V., & Ssenyange, K. (2022). Entrepreneurial competencies and performance of Ugandan SMEs: The mediating role of firm capabilities. *Cogent Business & Management, 9*(1), 2115622.

Kraehe, A. M. (2019). Entrepreneurship as creative destruction. *Art Education, 72*(5), 4–7.

Langroodi, F. E. (2021). Schumpeter's Theory of Economic Development: A study of the creative destruction and entrepreneurship effects on the economic growth. *Journal of Insurance and Financial Management, 4*(3), 17.

Marimuthu, M., & Arokiasamylsmail, L. M. (2009). Human capital development and its impact on firm performance: Evidence from developmental economics. *The Journal of International Social Research, 2*(8), 265–272.

Mayanja, S. N. (2020). Status of profitability of MSMEs in a developing country: Uganda as a case study. *International Journal of Sciences: Basic and Applied Research (IJSBAR)., 53*(1), 66–79.

Mayanja, S. S., Ntayi, J. M., Munene, J. C., Kagaari, J. R. K., Balunywa, W., & Orobia, L. (2019). Positive deviance, ecologies of innovation and entrepreneurial networking. *World Journal of Entrepreneurship, Management and Sustainable Development, 15*(4), 308–324.

Ministry of Trade, Industry and Cooperatives. (2015). *Uganda micro, small and medium enterprise (MSME) policy: Sustainable MSMEs for wealth creation and socio-economic transformation*. Ministry of Trade, Industry and Cooperatives.
Mpando, I., & Sandada, M. (2015). An assessment of the effect of innovation as mediator to business networking and performance relationship: evidence from Zimbabwean SMEs. *International journal of social sciences and humanity studies, 7*(2), 1–15.
National Planning Authority. (2020). *Third national development plan (NDPIII) 2020/21–2024/25*. National Planning Authority.
Nunnally, J. C. (1978). *Psychometric theory*. McGraw-Hill.
Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Harper & Row, Stanford University Press.
Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.
Pratono, A. H. (2018). From social network to firm performance: The mediating effect of trust, selling capability and pricing capability. *Management Research Review, 41*(6), 680–700.
Rahman, M. M., Tabash, M. I., Salamzadeh, A., Abduli, S., & Rahaman, M. S. (2022). Sampling Techniques (Probability) for quantitative social science researchers: A conceptual guidelines with examples. *Seeu Review, 17*(1), 42–51.
Ramadani, V., Hisrich, R. D., Abazi-Alili, H., Dana, L. P., Panthi, L., & Abazi-Bexheti, L. (2019). Product innovation and firm performance in transition economies: A multi-stage estimation approach. *Technological Forecasting and Social Change, 140*, 271–280.
Rexhäuser, S., & Rammer, C. (2014). Environmental innovations and firm profitability: Unmasking the Porter hypothesis. *Environmental and Resource Economics, 57*(1), 145–167.
Ribeiro, M. A., Adam, I., Kimbu, A. N., Afenyo-Agbe, E., Adeola, O., Figueroa-Domecq, C., & de Jong, A. (2021). Women entrepreneurship orientation, networks and firm performance in the tourism industry in resource-scarce contexts. *Tourism Management, 86*, 104343.
Sandada, M., Pooe, D., & Dhurup, M. (2014). Strategic planning and its relationship with business performance among small and medium enterprises in South Africa. *International Business & Economics Research Journal (IBER), 13*(3), 659–670.
Schumpeter, J. (1942). Creative destruction. *Capitalism, Socialism and Democracy, 825*, 82–85.
Sebikari, K. V. (2014). Critical analysis of the taxation policy on small businesses and entrepreneurial enterprises in Uganda. *Journal of Economics and Sustainable Development, 5*(10), 12–19.
Sendawula, K., Bagire, V., Mbidde, C. I., & Turyakira, P. (2021a). Environmental commitment and environmental sustainability practices of manufacturing small and medium enterprises in Uganda. *Journal of Enterprising Communities: People and Places in the Global Economy, 15*(4), 588–607.
Sendawula, K., Ngoma, M., Bananuka, J., Kimuli, S. N. L., & Kabuye, F. (2021b). Business networking and internationalization: Testing the mediation role of organizational learning. *World Journal of Entrepreneurship, Management and Sustainable Development, 17*(2), 246–259.
Struwig, F. W., Krüger, J., & Nuwagaba, G. (2019). The influence of the business environment on the growth of informal businesses in Uganda. *The Southern African Journal of Entrepreneurship and Small Business Management, 11*(1), 1–10.
Surangi, H. A. K. N. S. (2018). What influences the networking behaviours of female entrepreneurs? A case for the small business tourism sector in Sri Lanka. *International Journal of Gender and Entrepreneurship, 10*(2), 116–133.
Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509–533.
Turyakira, P., Sendawula, K., Turyatunga, P., & Kimuli, S. N. (2019). The joint effect of firm capability and access to finance on firm performance among small businesses: A developing country perspective. *African Journal of Business Management, 13*(6), 198–206.
UBOS. (2021). *Uganda Bureau of statistics, 2021 statistical abstract*. Uganda Bureau of Statistics.
Udriyah, U., Tham, J., & Azam, S. (2019). The effects of market orientation and innovation on competitive advantage and business performance of textile SMEs. *Management Science Letters, 9*(9), 1419–1428.
Uganda Revenue Authority. (2019). *Annual revenue performance report, financial year 2019/2020*. Uganda Revenue Authority.
UN Capital Development Funds. 2020. Uganda business impact survey, impact of COVID-19 on formal sector small and medium enterprises. https://www.uncdf.org/article/5634/uganda-business-impact-survey-2020
Wang, C. L., & Chung, H. F. (2020). Business networking and innovation of Asian enterprises in Western countries: The moderation of institutional distance. *Industrial Marketing Management, 88*, 152–162.
Wincent, J., Anokhin, S., & €Ortqvist, D. (2013). Supporting innovation in government-sponsored networks: The role of network board composition. *International Small Business Journal, 31*(8), 997–1020.
Zhang, D., Rong, Z., & Ji, Q. (2019). Green innovation and firm performance: Evidence from listed companies in China. *Resources, Conservation and Recycling, 144*, 48–55.
Zheng, C., Ahsan, M., & DeNoble, A. F. (2020). Entrepreneurial networking during early stages of opportunity exploitation: Agency of novice and experienced new venture leaders. *Entrepreneurship Theory and Practice, 44*(4), 671–699.

Publisher's Note