Australian Journal of Business and Management Research
New South Wales Research Centre Australia (NSWRCA)

Volume. 7, Issue. 1, (64-78) ISSN (Online): 1839 - 0846

Social Network Ties, Entrepreneurial Orientation, and Entrepreneurial Intention among University Students in Ghana

Joseph Owusu[1], Naeem Hayat[2], Wilberforce Owusu-Ansah[3], and Peter Kwasi Oppong[4]

Received: 14 June, 2022
Final Revision: 10 August, 2022
Accepted: 17 August, 2022
e Published: 16 September 2022
10.52283/NSWRCA.AJBMR.20220701A05

Abstract

To expand the existing literature on entrepreneurial orientation and entrepreneurial intention, the current study determines the mediating role of social network ties in the relationship between entrepreneurial orientation and entrepreneurial intention among university students in Ghana. Data was conveniently gathered from 728 full time university students in Ghana. Structural equational modeling findings demonstrated that entrepreneurial orientation positively influenced social network ties and also positively affected entrepreneurial intention. Moreover, social network ties mediated entrepreneurial orientation and entrepreneurial intention nexus. University students should try to establish formal and informal social network relations to identify business opportunities, acquire resources in order to enhance their proclivity to start a new business.

Keywords: Entrepreneurial orientation, entrepreneurial intention, social network ties, TPB, Ghana.

I. Introduction

Africa is an emerging and fastest-growing continent in the world, and it is reported that 375 million youth will secure job in Africa market by 2030. This significant increase in demographic figures will drive Africa continent workforce to over one billion people, the largest in the world (MasterCard, 2017). In the past decades the existing culture as well as the orientation has been that graduates from the universities who excel with good grades from their respect disciplines were guaranteed with jobs in their chosen fields. But as more and more people receive university education, this opportunity ceases to exist (Anwar et al., 2020; Zathurecky and Marinic, 2015). Besides, academic trainings and education had also focused on preparation students for employment market. It is also reported that there is a huge gap between limited job opportunities and the demand of young people looking for

[1] Department of Marketing and Corporate Strategy, School of Business, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.
josephowusu87@yahoo.com (Corresponding Author)
https://orcid.org/0000-0003-3171-4359
[2] Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Pengkalan Chepa, Kelantan, Malaysia.
naeem.hayat100@gmail.com
https://orcid.org/0000-0003-0756-5226
[3] Department of Marketing and Corporate Strategy, School of Business, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.
woansah@gmail.com
https://orcid.org/0000-0001-8359-0912
[4] Department of Marketing and Corporate Strategy, School of Business, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
peteroppong72@gmail.com
https://orcid.org/0000-0003-2670-4295

job. Suggesting that it will be extremely difficult to secure a formal employment and to reduce poverty. Moreover, for some time now an observation has been made regarding a mismatch between the skills of young people entering the workforce and the needs of employers (Mastercard, 2017). Now university graduates need to exhibit to prospective employers that they have the requisite skill set such as problem solving, flexibility and adaptability and entrepreneurial orientation comprising innovativeness, proactiveness, and risk-taking before they are offered jobs (Hassan et al., 2021; Anwar et al., 2020). Interestingly, it must be indicated that university graduates considered employment from public and private sector employers as safe haven and a job for life. However, the truth of the matter is that the narrative has changed and risk is an integral component of entrepreneurial orientation, is now considered as the new safe (Gage, 2012). Thus, the significant paradigm shift is that there is a critical need and a requirement for people especially university graduates to strive to become entrepreneurs and their own bosses. Evidence from research reveals that most of today's millionaires were not born into their wealth. For instance, a study conducted by Wealth-X revealed that near to 68% of people who possess a net worth of $30 million and above acquired by working themselves. Moreover, Fiedelity investment survey conducted revealed that 88% of all millionaires are entrepreneurs, indicating that they made their wealth themselves without inheritance (businessnewsdaily.com, 2022). This suggests that entrepreneurship plays an important role in fostering growth, employment and income in the world. Globally, entrepreneurship education has become an effective catalyst of stimulating entrepreneurship growth for socio-economic development through job and wealth creation (Morris et al., 2020; Santos et al., 2019). Compare to education in general, entrepreneurship education is developed focusing on individual competencies, behaviour and traits gear toward identification of opportunities and creation of ideas (Kourilsky, 1996; Boahemaah, et al., 2020). This type of education serves a unique purpose for every nation regarding socio- economic growth and development. This type of entrepreneurship education aid students to develop creative and innovative skills in order to establish new ventures instead of depending on the government for non-existence jobs (Henry et al., 2005). In a recent study, Nunfam et al. (2022) indicated that there is an urgent need to focus on entrepreneurship education and training on exposing students to productive entrepreneurial curriculum moderated by practical oriented student-centered teaching methods. This approach should be aimed at producing students with hands-on experiences, optimistic entrepreneurial attitudes, high need for accomplishments and strong locus of control.

Entrepreneurial orientation (EO) is considered as the centre of entrepreneurship education (Farooq, 2016). Over the years various socio-economic factors have directed policy makers and strategic experts to consider entrepreneurship development particularly entrepreneurial orientation as an essential element for socio-economic development (Mirralles et al., 2015). Prior empirical research (Farooq, 2016; Lortie & Castogiovanni, 2015) indicated that well-refined policies can spark entrepreneurial orientation among university students. It is expected that university graduates particularly business students are to start and create a new businesses instead of searching for jobs (Kolvereid & Isaksen, 2006). However, the reality is that most of the graduates with high interest of starting a new business normally end-up looking for jobs after graduation (Farooq, 2016). In this present condition where entrepreneurship is regarded as catalyst for socio-economic growth and development, it is imperative to understand essential factors that can influence entrepreneurial orientation among university students (Perez-Perez et al., 2021). It has been argued that policy makers can benefit from workable policies for entrepreneurial orientation and enterprise development among university students if they do have better understanding of EO outcomes (Hassan et al., 2021). Despite the massive research on EO in the entrepreneurship domain (Robison & Stubberud, 2014; Hassan et al., 2021; Perez-Perez et al., 2021), little literature abounds as to how entrepreneurial orientation (EO) relates to entrepreneurial intention (EI) among university students (Perez-Perez et al., 2021) This makes it difficult to promote entrepreneurial intention (EI) among university students (Anwar et al., 2020). Based on the related literature this study has identified limited university entrepreneurial intention (EI) research, and has seen that by having entrepreneurial orientation (EO) and social network ties (SOT) university students can develop active SOT that is essential but neglected as driver of EI among university students (Anwar et al., 2020). In line with this, the study aims to achieve these specific objectives. First, to examine the effect of entrepreneurial orientation (EO) on social network ties SOT. Second, to determine the effect of social network ties (SOT) on entrepreneurial intention (EI). Third to establish the relationship between EO and EI. Finally to determine the mediating role of SOT in the association between EO and EI among university students. This is worth exploring if EO spillover into EI through social network ties. It is worthy to mention that previous studies have established relationship between EO and EI. (Hassan et al., 2021; Robison & Stubberud, 2014). Little is known about mediating variables in the relationship. To the best of our knowledge no previous study has employed social network ties as a mediator between EO and EI nexus. Hence, this study attempts to close this gap. In order to overcome the research limitations, the study is underpinned by the Theory of Planned Behavior (TPB) to explain the relationship between EO and EI among university students. Though, similar studies have extended the theory in different geographical contexts (Farooq et al., 2018; Hassan et al., 2021). However, such relationship based on this theory is yet to be extended to the university students in sub Saharan Africa. Moreover, this study provides a significant contribution on how social network ties affects the existing constructs of TPB specifically behavioural control in determining university students' intention towards entrepreneurial behaviour. By so doing this study

can be regarded as a significant step-forward, to partner with TPB in the field of entrepreneurship. It is equally important to indicate that this study offers a significant contribution in terms of theory, method and context by explicating TPB in Ghanaian context, using Partial Least Square Structural Equational Modeling (PLS-SEM) analysis approach. The study is orderly organized for its readers. First, we elaborate on the theoretical underpinning of the study together with literature review of the various variables used in the study. Second, the study discusses and develops the proposed hypotheses based on logical relationships extracted from the literature, and continue to present the proposed conceptual framework. Third, we present the research method, analysis and findings. Finally, we elaborate detail theoretical and practical implications of the study alongside with limitations and future research directions based on the study findings.

II. Literature Review and Development of Hypotheses

The TPB Theory

As pointed out earlier, the present study employs TPB theory to explain the proposed association between EO and EI. It is important to note that TPB theory remains one of the major intention-based theories that provide support to entrepreneurial behaviourial research (Farooq, 2016; Nunfam et al., 2022). Besides the TPB is universally accepted in entrepreneurship literature as the most profound intention-based theoretical model for developing conceptual frameworks in exploring entrepreneurial behaviour (Linan, 2004; Nunfam et al., 2022). In the body of knowledge, the TPB is viewed as a de facto approach employed to investigate individual entrepreneurial intention towards entrepreneurial behaviour based on its widely recognition and acceptance by researchers (Farooq, 2016; Linan, 2004). In this study the TPB is premised on the basic principle that individuals depend largely on their competencies in determining their perceived ease (perceived behavioural control) to perform entrepreneurial activities (Linan & Chen, 2009). In line with this, it can be argued that the TPB theory offers the fundamental grounds for generalisability of scholarly research findings emanating from diverse geographical context of entrepreneurial behaviors (Farooq & Radovic-Markovic, 2017). The TPB is important to this study and can therefore be regarded as the commanding theoretical lens for analysing the impacting factors of intention towards entrepreneurial behaviour (Farooq, 2016; Lortie & Castogiovanni, 2015). Indeed, the TPB theory in principle admits inclusion of additional variables if only the variable commands a significant change in either individual intention or behaviour. However, based on our literature search it can be argued that social network ties might play a mediating role between EO and EI. Hence, this study makes attempt to provide theoretical account and provide the role of additional mediating variable in the context of EI among university students.

Social network ties (SOT)

According to Farooq (2016) social network ties simplifies the unique individual life style usually shaped by family background, education and cultural values which can impact individual perception of intention towards entrepreneurial behaviour. Individuals in the society are connected to diverse groups of people with recognised social, market, financial, technical capacity and other essential human-based assets which they can offer as contribution towards building entrepreneurial capacity. Social network ties are paramount to entrepreneurship as they facilitate smooth acquisition of resources, knowledge, and capital to entrepreneurs and also gather essential information from the entrepreneurs to the broader community (Ali, 2016; Biraglia & Kadile, 2017). In line with this, previous research suggests that social network ties influence entrepreneurial intention (Farooq et al., 2018). Besides, academic scholars (Chen et al., 2015; Farooq et al., 2017) revealed that social network ties can play an important role at the beginning of a nascent entrepreneur new venture success. This study selected social network ties as mediating variable to explain the link between EO and EI. Thus, individual with perceived strong social network ties is more likely to secure resources from his network to pursue his entrepreneurial activities.

Entrepreneurial orientation (EO)

EO which represents individual capability to assimilate entrepreneurial ideas, awareness, knowledge and understanding in providing holistic entrepreneurial mind-set (Ikpesu, 2016). Miller (1983) first developed the concept of EO with three components comprising risk-taking, innovativeness and proactiveness. EO was further redefined by Lumpkin and Dess (1996). First and foremost, they accepted the definition by Miller (1983) and added additional two dimensions of EO namely autonomy and competitive aggressiveness. Over the years EO has been regarded as both firm-level construct (Gupta & Gupta, 2015; Hafeez et al., 2011) and individual-level construct (Robinson & Stubberud, 2014). In line with Robinson and Stubberud (2014), this current study adopt the individual-level construct in its aggregate form since it is in a critical purview of individual entrepreneurial intention and behaviour. This study selected EO as a predictor variable in order to ascertain how EO and social network ties spill over into entrepreneurial intention (EI).

Entrepreneurial intention (EI)

Entrepreneurial intention is defined as the degree of individual commitment, determination and readiness to put in the needed effort to start a new business (Farooq, 2016). Moreover, the committed to act is a critical determinant of the creation of an entrepreneurial venture, which is considered as the main driver in the entrepreneurial activity (Karima et al., 2016; Zhao, et al., 2010). Recent studies also considered EI as developing individual entrepreneurial competencies including innovation, creativity and effective leadership (Perez-Perez et al., 2021; Sahoo & Panda, 2019). In accordance with the TPB theory individual intention to start a new business manifests in his behaviour (Farooq, 2016). Deeper understanding and analyses of individual entrepreneurial intention is critical to entrepreneurial process (Ozaralli & Rivenburgh, 2016). The present study focuses on EI as a dependent variable in order to establish how EO and individual social networks ties influence EI. Moreover, it is believed that university students with greater EO exposure are likely to create social network ties which may support their entrepreneurial intention.

Entrepreneurial orientation and social network ties

Empirical evidence indicates that EO is related to social network (Frese, 2009). Past studies (Hallen & Eisenhardt, 2012; Zimmer, 1986) suggest that many individuals depend on formal and informal social network ties such as professional bodies, friends and family and other weak-ties relations to identify business opportunities in order to establish a new venture. Also, Frese (2009) reveals that individuals who have high entrepreneurial orientation are likely to take steps regarding the development of their relevant and beneficial social network ties. Thus, such move support individuals with EO characteristics to perform better compared to individuals who do not possess EO traits, and at the same time failed to take advantage of social network ties strategy (Sigmund et al., 2015). In this regard, the significance of relying actively on social network ties by prospective entrepreneurs cannot be overlooked. In keeping the arguments above, we hypothesised that:

H1: Student entrepreneurial orientation positively affects social network ties.

Entrepreneurial orientation and entrepreneurial intention

It is also paramount to understand how entrepreneurial orientation might influence entrepreneurial intention. Given the idiosyncratic predictive power of EO (Martins & Perez, 2020), it is expected that the aggregate form of EO will strongly predict EI. Past related literature have established a positive association between EO and EI nexus (Martins & Perez, 2020; Robinson & Stubberud, 2014). For instance, a study conducted by Ibrahim and Lucky (2014) revealed a positive link between EO and EI among Nigerian students studying in Malaysia. In accordance with the above arguments, we hypothesised that:

H2: Student entrepreneurial orientation positively influences entrepreneurial intention

Social network ties and entrepreneurial intention

It is argued that the strength of individual social network determines his ability to secure resources required to start a new venture (Farooq, 2017). Also, it is reported that SOT has a positive association with entrepreneur's performance (Semrau & Werner, 2014). It is equally important to mention that social network has positive impact on entrepreneurial behaviour (Farooq, 2016). Previous research indicates that social networking accelerates the success of entrepreneurial intention particularly among nascent entrepreneurs (Quan, 2012). Past study revealed that ranging between 40% and 50% of people who start a business got their idea through social contacts (Barringer & Ireland, 2019). Reference to the above arguments this present study is of the opinion that there is a strong association between social network ties and entrepreneurial intention among university students. Following the above assertions, it is hypothesised that:

H3: Student social network ties positively influences entrepreneurial intention.

Social network ties, entrepreneurial orientation and entrepreneurial intention.

Prior studies have examined EO and EI with mediators such as entrepreneurial motivation (Hassan et al., 2021) and psychological capital (Mahfud et al., 2019). The existing literature reveals that individual psychological attitudes modified certain actions when it comes to taking business initiatives and social network ties was mentioned as one of them (Frese & Gielnick, 2014). Based on this assertion, the significance of applying social network ties in pursuing individual entrepreneurial intention cannot be underestimated. Individuals rely on both

informal and formal networks to identify opportunities, acquire resources in order to create a new business (Hallen & Eisenhardt, 2012). The capability of an individual to plan, actively search and develop social networking can be beneficial when starting a new business (Shafi et al., 2019). A critical look at EO contribution to social networking strategies, such as individual innovativeness can lead to creative and idiosyncratic ways of actively establishing social network ties with other people. The individual risk-taking ability assists in identification and management of risk that emanate from the social network development. Moreover, individual proactiveness helps to plan and foresee those networks that are good or bad to the business initiative (Heavy et al., 2015). Past studies have demonstrated that EO enhance EI (Hassan et al., 2021; Martins & Perez, 2020; Robinson & Stubberud, 2014). In line with the arguments above, we hypothesised that:

HM1: The relationship between EO and EI is mediated by social network ties

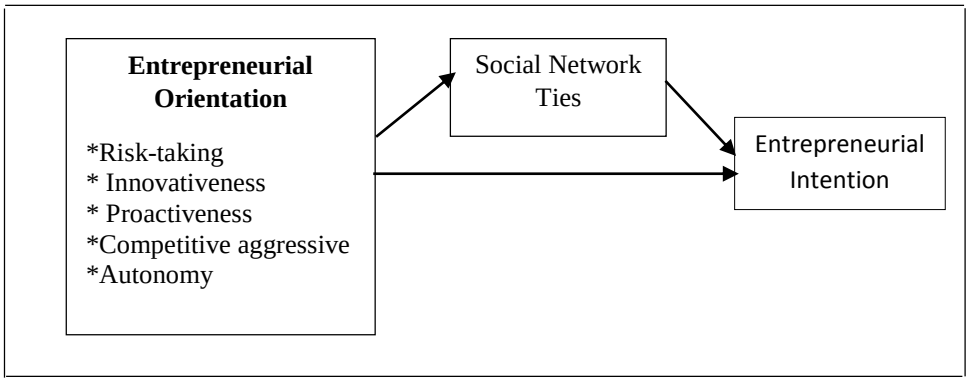

Figure 1: Conceptual framework.

III. Methodology

This particular research depended on survey-based cross-sectional data gathered from Kwame Nkrumah University of Science and Technology (KNUST) a public university in Ghana. We applied convenience sampling method in gathering the data. Previous studies (e.g. Hassan et al., 2020; Anwar et al., 2020) used this sampling technique on similar EI studies and gave reliable and valid outcomes. In order to mitigate common method bias the recommendations of Podsakoff and Organ (1986) were strictly abide by while developing the research instruments. The language used in developing the questionnaire were simple and straightforward, double-barreled questions were completely omitted. Further reduction of common method bias was achieved by appealing to the respondents not to disclose their identity on the questionnaire in any form. Moreover, we assured respondents that the study was meant for only academic purposes and therefore their participation was voluntary. In totality we received 955 responses, of which 728 were usable. The excluded 227 responses were suffering from straight line effect and incomplete filling of the questionnaire. Of the 728 final samples used, 52.9 % and 47.1% were male and female students respectively. Finally, 20.3% were diploma students, 64.4% were bachelor students and 15.1% were master students.

Measures development

A conceptual framework depicting entrepreneurial orientation (EO) and social network ties (SOT) was hypothesised to drive university students' entrepreneurial intention (EI). Moreover, the study examined whether EO and EI nexus is mediated by social network ties. Questionnaire for the study was adapted and modified to suit the study context with validated scales. EO questionnaire was adapted from Miller (1983), Lumpkin and Dess (2001), Lerner et al., (1997). The items include "I like to take chances in venturing into new business" (risk-taking), "I am more capable of identifying creative ideas" (innovation), "I am prepared to take any business opportunity that comes my way" (proactiveness), "Generally, I have an adequate level of capabilities to compete" (competitive aggressiveness) and "I have the authority to act in my best interest" (autonomy). Overall, thirty-six items were used to measure EO in its composite form. Ten items adapted from Bolton and Lane (2012) were utilized to measure EI. Some of the items include "I will make every effort to create and maintain my own company", "I intend to start a business in the coming years" and "I desire to be self-employed". To measure social networking ties, a five-item measure developed by Zhao (2005) was adapted. A sample item is, "I skilfully use intermediaries to introduce me to those people with whom I really want to associate."

Descriptive analysis results

The descriptive data analysis suggests that 52.9% of the study respondents were male. The majority of the respondents 75.5% were single and remaining were married. 64.4% of the study respondents were pursuing bachelor degree, 20.3% were diploma students and the remaining 15.1% were master students. Majority of the study respondents representing 47.4% had the age between 21-25 years, 17.7% of respondents had the age below 21 years, 15.8% of the respondent were between 26-30 years of age, 10.7% of the respondents have the age between 31-35 years, 5.5 % of the respondents have the age between 36-40 years while 2.9% of the respondents have the age above 41. The demographic information of the 728 respondents who participated in the study is provided in Table 1.

Table 1. Demographic Characteristics

	N	%		N	%
Gender			*Marital Status*		
Male	385	52.9	Single	550	75.5
Female	343	47.1	Married	178	24.5
Total	**728**	**100.0**	**Total**	**728**	**100.0**
Age Group					
Below 21 years	129	17.7	*Education*		
21–25 years	345	47.4			
26–30 years	115	15.8	Diploma/technical school certificate	148	20.3
31–35 years	78	10.7	Bachelor degree or equivalent	470	64.6
36–40 years	40	5.5	Master's degree	110	15.1
41 above	21	2.9			
Total	**728**	**100.0**	**Total**	**728**	**100.0**

Source: Authors data analysis

IV. Data Analysis

We exploited the PLS-SEM analysis approach to estimate the data of the current model. Due to the non-normality issue of the current data the Smart PLS 3.1 approach was employed to test the model (Hair et al., 2019). Data analysis performed in two-steps, where the first stage estimates the latent construct level reliabilities and validities. The Cronbach's Alpha (CA), Dillion-Goldseins rho (DG-rho), and composite reliability (CR) were utilized to gauge the reliabilities values for the latent constructs. Validities were estimated with average variance extracted (AVE) measure to evaluate convergent validity. To determine the discriminant validity, we utilized the Fornell-Larcker criterion, Heterotrait-Monotrait ratio, as well as the loading and cross-loading values (Henseler et al., 2015). The hypotheses testing executed with the path coefficients with confidence interval, *t*-value and *p*-value (Hair et al., 2019).

We had a higher order construct (HOC) in the study, i.e., EO, based on five lower order constructs (LOC) of innovativeness, proactiveness, risk-taking, autonomy, and competitive aggressiveness. According to Becker, Klein and Wetzels (2012) to estimate HOC three procedures can be employed comprising repeated indicator method, two-stage method and hybrid approach. However, Hair et al. (2019) suggested that two-stage approach performs better estimation than other two approaches. In the first stage of the analysis, all the LOC construct were utilized to develop the latent factors scores. LOC scores for all the constructs were saved and utilized to estimate the HOC in the second stage of analysis (Becker et al., 2012). The reporting of constructs reliabilities and validities for the stage one and stage two were necessary to achieve the model level of consistencies (Hair et al., 2019).

Reliabilities and validities

Stage 1 analysis:

We run the model with all LOC as the stage 1 to achieve the scores for the HOC (Becker et al., 2012). Cronbach's alpha, composite reliability and Dillon–Goldstein's rho values for each lower order constructs were above the 0.70 threshold (Hair et al., 2019), which confirms the internal consistency (Chin, 2010). Additionally, Table 2 further illustrates that the average variance extracted values exceeding 0.50, endorses convergent validity. All the variance inflation factor (VIF) values for each construct is less than 0.50, threshold indicating no multicollinearity problem (Chin, 2010).

Table 2: Latent construct reliabilities (Stage 1)

Variables	No. Items	CA	DG *rho*	CR	AVE	VIF
AUT	6	0.882	0.884	0.911	0.630	2.226
CMA	7	0.846	0.863	0.882	0.519	3.264
INN	8	0.888	0.890	0.911	0.561	3.392
PRA	8	0.911	0.913	0.928	0.618	4.223
RKT	7	0.859	0.868	0.892	0.544	2.450
SOT	5	0.822	0.845	0.871	0.574	1.120
EIN	10	0.942	0.945	0.951	0.661	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
Source: Author's data analysis

The stage 1 result depicts that the discriminant analysis work well for the stage 1. The results provided in the Table 3 and Table 4.

Table 3: Construct level discriminate validities (stage1)

	AUT	CMA	INN	PRA	PKT	SOT	EIN
Fornell-Larcker Criterion							
AUT	0.794						
CMA	0.709	0.720					
INN	0.635	0.733	0.749				
PRA	0.702	0.788	0.718	0.786			
PKT	0.572	0.642	0.709	0.696	0.737		
SOT	0.413	0.406	0.397	0.380	0.332	0.758	
EIN	0.576	0.614	0.661	0.708	0.642	0.443	0.697
Heterotrait-Monotrait Ratio (HTMT)							
AUT	-						
CMA	0.813	-					
INN	0.716	0.818	-				
PRA	0.782	0.866	0.904	-			
RKT	0.657	0.729	0.861	0.778	-		
SOT	0.454	0.475	0.411	0.399	0.379	-	
EIN	0.630	0.661	0.718	0.762	0.645	0.471	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; SOT: Social network ties; EON: Entrepreneurial orientation, EIN: Entrepreneurial intention.
Source: Author's data analysis

Table 4: Loading and cross-loading (Stage 1)

Items	AUT	CMA	INN	PRA	RKT	SOT	EIN
AUT – Item 1	***0.759***	0.583	0.517	0.558	0.480	0.328	0.484
AUT – Item 2	***0.796***	0.584	0.509	0.597	0.466	0.360	0.494
AUT – Item 3	***0.789***	0.526	0.514	0.547	0.459	0.292	0.428
AUT – Item 4	***0.840***	0.572	0.499	0.565	0.462	0.346	0.465
AUT – Item 5	***0.829***	0.577	0.513	0.570	0.437	0.332	0.469
AUT – Item 6	***0.745***	0.528	0.470	0.498	0.417	0.308	0.394
CMA – Item 1	0.540	***0.786***	0.620	0.696	0.526	0.330	0.529
CMA – Item 2	0.584	***0.784***	0.641	0.671	0.528	0.307	0.511
CMA – Item 3	0.515	***0.748***	0.596	0.658	0.510	0.215	0.531
CMA – Item 4	0.401	***0.581***	0.319	0.346	0.285	0.240	0.245
CMA – Item 5	0.493	***0.732***	0.451	0.487	0.402	0.330	0.354
CMA – Item 6	0.566	***0.764***	0.557	0.594	0.513	0.348	0.498
INN – Item 1	0.449	0.552	***0.730***	0.588	0.661	0.273	0.432
INN – Item 2	0.479	0.551	***0.786***	0.654	0.670	0.281	0.528
INN – Item 3	0.407	0.490	***0.706***	0.512	0.526	0.284	0.400

INN – Item 4	0.477	0.586	***0.777***	0.614	0.567	0.378	0.480
INN – Item 5	0.511	0.580	***0.791***	0.600	0.554	0.304	0.501
INN – Item 6	0.446	0.527	***0.718***	0.558	0.525	0.289	0.473
INN – Item 7	0.520	0.563	***0.766***	0.709	0.537	0.311	0.603
INN – Item 8	0.505	0.536	***0.713***	0.644	0.499	0.258	0.525
PRA – Item 1	0.543	0.633	0.716	***0.792***	0.584	0.292	0.561
PRA – Item 2	0.570	0.654	0.701	***0.838***	0.597	0.317	0.577
PRA – Item 3	0.553	0.606	0.584	***0.784***	0.531	0.292	0.558
PRA – Item 4	0.548	0.604	0.618	***0.743***	0.463	0.286	0.492
PRA – Item 5	0.553	0.602	0.653	***0.814***	0.562	0.293	0.612
PRA – Item 6	0.522	0.593	0.619	***0.767***	0.517	0.308	0.542
PRA – Item 7	0.539	0.568	0.564	***0.739***	0.517	0.282	0.530
PRA – Item 8	0.586	0.690	0.676	***0.808***	0.596	0.320	0.579
RKT – Item 1	0.417	0.395	0.520	0.478	***0.724***	0.208	0.414
RKT – Item 2	0.388	0.399	0.483	0.452	***0.695***	0.178	0.424
RKT – Item 3	0.396	0.401	0.461	0.409	***0.643***	0.253	0.354
RKT – Item 4	0.476	0.555	0.622	0.592	***0.780***	0.261	0.456
RKT – Item 5	0.447	0.526	0.645	0.582	***0.818***	0.256	0.497
RKT – Item 6	0.410	0.505	0.589	0.539	***0.764***	0.243	0.437
RKT – Item 7	0.418	0.498	0.562	0.508	***0.725***	0.307	0.411
SOT – Item 1	0.391	0.343	0.384	0.403	0.286	***0.756***	0.427
SOT – Item 2	0.239	0.283	0.274	0.214	0.230	***0.756***	0.264
SOT – Item 3	0.379	0.348	0.319	0.357	0.275	***0.811***	0.402
SOT – Item 4	0.226	0.242	0.208	0.159	0.196	***0.738***	0.216
SOT- Item 5	0.244	0.279	0.253	0.187	0.235	***0.724***	0.269
EIN – Item 1	0.459	0.477	0.457	0.497	0.453	0.339	***0.696***
EIN – Item 2	0.463	0.504	0.578	0.612	0.460	0.386	***0.828***
EIN – Item 3	0.490	0.495	0.509	0.573	0.484	0.319	***0.820***
EIN – Item 4	0.418	0.449	0.492	0.516	0.451	0.411	***0.790***
EIN – Item 5	0.491	0.519	0.536	0.594	0.495	0.377	***0.875***
EIN – Item 6	0.418	0.431	0.457	0.505	0.438	0.346	***0.754***
EIN – Item 7	0.514	0.560	0.608	0.654	0.527	0.329	***0.881***
EIN – Item 8	0.460	0.497	0.554	0.571	0.438	0.359	***0.806***
EIN – Item 9	0.453	0.510	0.563	0.575	0.472	0.367	***0.800***
EIN – Item 10	0.506	0.535	0.592	0.636	0.505	0.374	***0.859***

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
Source: Author's data analysis

Stage 2 analysis (hoc):

Cronbach's alpha, composite reliability and Dillon–Goldstein's rho values for every construct is well above the threshold of 0.80, which confirms the internal consistency of the items (Chin, 2010). Additionally, Table 5 further illustrates that AVE values of more than 0.50, endorses convergent validity. Also, all VIF values for each construct was below the threshold of 0.50, indicating no multicollinearity issue (Chin, 2010).

Table 5. Reliability and Validity

Variables	No. Items	CA	DG *rho*	CR	AVE	VIF
ENO	5	0.922	0.926	0.941	0.763	1.241
SOT	5	0.822	0.841	0.871	0.576	1.000
EIN	10	0.942	0.944	0.951	0.661	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
SD: Standard Deviation; CA: Cronbach's Alpha; D.G. *rho* - Dillon-Goldstein's *rho*; C.R. - Composite Reliability; AVE - Average Variance Extracted; VIF - Variance Inflation Factors
Source: Author's data analysis

Table 6. Discriminant Validity (Stage 2)

	ENO	SOT	EIN
Fornell-Larcker Criterion			
ENO	0.721		
SOT	0.440	0.759	
EIN	0.721	0.441	0.813
Heterotrait-Monotrait Ratio (HTMT)			
ENO	-		
SOT	0.480	-	
EIN	0.771	0.471	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
Source: Author's data analysis

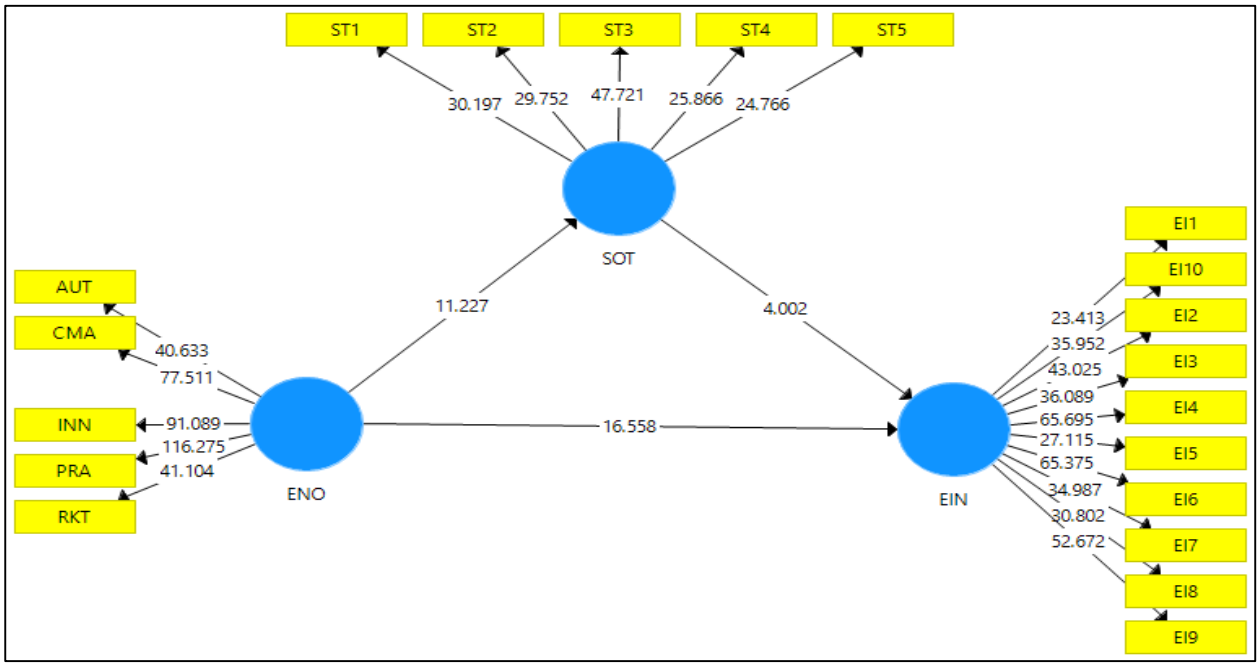

Figure 2: Study Final Model

Table 7. Loadings and Cross-Loading (Stage 2)

Code	ENO	SOT	EIN
AUT	***0.819***	0.419	0.565
CMA	***0.889***	0.403	0.618
INN	***0.905***	0.395	0.665
PRA	***0.921***	0.377	0.709
RKT	***0.830***	0.328	0.582
SOT1	0.415	***0.751***	0.427
SOT2	0.285	***0.762***	0.265
SOT3	0.386	***0.806***	0.402
SOT4	0.235	***0.744***	0.216
SOT5	0.274	***0.728***	0.270
EIN1	0.537	0.338	***0.697***
EIN2	0.603	0.383	***0.828***
EIN3	0.584	0.317	***0.820***
EIN4	0.534	0.410	***0.790***
EIN5	0.604	0.374	***0.875***
EIN6	0.516	0.345	***0.755***
EIN7	0.658	0.327	***0.881***

EIN8	0.580	0.357	***0.806***
EIN9	0.592	0.365	***0.799***
EIN10	0.637	0.371	***0.858***

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Pro-activeness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
2) The Italic values in the matrix above are the item loadings, and others are cross-loadings
Source: Author's data analysis

Path analysis

Having satisfy all constructs reliabilities and validities scores, the next was measurement assessment performed for the model. The analysis suggests that the ENO as exogenous construct can explain 19.4% of the variance in the SOT for the study model. The exogenous constructs (ENO and SOT) can explain the 53.9% of the change in the EIN. Table 8 presents the model standardized path scores, t-values and path significance levels. Overall, the predictive relevance of the model is 52%. Indicating high predictive relevance (Chin, 2010). The path coefficient for entrepreneurial orientation ENO (β= 0.440; t- value =11.227; P= 0.000) specifies a significant positive impact of ENO on SOT. This finding confirms H1. The path coefficient of ENO (β= 0.654; t- value = 16.558; P= 0.000) affirms the direct positive and significant effect of ENO on EIN. The study, therefore, accepts H2. The path coefficient for SOT (β= 0.153; t- value =4.002; P= 0.000) specifies a significant positive impact of SOT on the EIN, and support evidence to accept H3.

Table 8. Path Coefficients

Hypo		Beta	CI - Min	CI - Max	*T*	*p*	r^2	f^2	Decision
Factors affecting entrepreneurial intention									
H1	ENO ➔ SOT	0.440	0.376	0.504	11.227	0.000	0.194	0.241	Accept
H2	ENO ➔ EIN	0.654	0.587	0.717	16.558	0.000		0.749	Accept
H3	SOT ➔ EIN	0.153	0.090	0.217	4.002	0.000	0.539	0.041	Accept

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Pro-activeness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
Source: Author's data analysis

Mediational analysis

The result of mediational effect of STO reported in the Table 9, indicates that STO significantly mediates ENO and EIN nexus. The result reveals that social network ties (SOT) mediates ENO and EIN association given (β = 0.067; CI min = 0.040; CI max = 0.097; Sig. = 0.000) that offer substance to accept HM1. Result depicted in Table 9.

Table 9. Mediational analysis

Hypo	Associations	Beta	CI - Min	CI - Max	*t*	*P*	Decision
HM1a	ENO ➔STO ➔ EIN	0.067	0.040	0.097	3.925	0.000	Mediation

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.
Source: Author's data analysis

V. Discussion and Conclusion

Policy makers and other strategic planners have resorted to entrepreneurship as the game-changer for job creation and economic growth and development. In doing so, it is argued that effort towards entrepreneurship education would have significant positive effect on student entrepreneurial behaviour and intention in near future (Nunfam et al. 2022). Therefore it has become paramount to initiate and promote entrepreneurial culture among students. In the past the general believe was that entrepreneurs are born in the aged-old nature-nurture controversy. Currently, the argument has drastically changed with scholars contending and recognizing that entrepreneurs are made. Thus, individuals who exhibit passion for entrepreneurship ultimately become entrepreneurs. Again past researchers have identified factors that can lead to entrepreneurship development among individuals. Typical among them are entrepreneurship education and training and entrepreneurial orientation (e.g. Anwar et al., 2020, Brunel et al., 2017). Any university that provides effective entrepreneurial orientations is on the right path to equip and support students to start their own entrepreneurial ventures (Tomy & Pardede, 2020). The results of this study depicts broader insights into the role of EO and its influence on EI. In this study we examined the direct effect of EO on SOT. The finding indicates that EO as exogenous construct has positive and significant effect on SOT

given (β= 0.440; t= 11.227; P= 0.000). This finding affirms hypothesis 1. The result is broadly in consonance with previous studies (e.g. Frese, 2009; Hallen & Eisenhardt, 2012; Frese and Gielnik, 2014 and Sigmund et al., 2015) that established positive relationship between individual EO and social network ties (SOT). These scholars suggested that many individuals depend on formal and informal social ties such as friends, professionals and other family members to identify business opportunities in order to start a new business. Thus, EO offers the appropriate entrepreneurial mindset to students which support them to engage in the development of right social connectivity with relevant people, agencies, and institutions (Sigmund et al., 2015). Furthermore, based on the reviewed literature entrepreneurial orientation (EO) was considered to have positive effect on entrepreneurial intention (EI) and was indicated as hypothesis 2. As indicated in table 8 the path coefficient of EO (β=0.654; t= 16.558; P= 0.000) affirms the positive and significant effect of EO on EI. This empirical finding is in tandem with past studies (e.g. Anwar et al., 2020; Martins & Perez, 2020; Robinson & Stubberud, 2014) that established positive and significant association between EO and EI. Our findings have extended the research stream on individual-level of EO by revealing that in the context of behaviour EO is linked to EI (Martins et al., 2020). Also, this study hypothesised that the effect of SOT on EI is positive. As illustrated in table 8, the path coefficient of SOT on EI is positive and significant given (β=0.153; t= 4.002; P= 0.000). This result did support hypothesis 3. This finding is in agreement with past related studies (e.g. Farooq, 2017; Semrau and Werner, 2017) that revealed positive and significant relationship that exist between SOT and entrepreneurial behaviour. Finally, as indicated in table 9, the study examined the direct and indirect effects of EO on EI and highlighted on the importance of social network ties as a useful mediating variable to explain the relationship. The study opined that EO positively and significantly affects EI through the mediating role of social network ties. This revelation elucidates that having the right social network ties enhances individual's capability to take advantage of EO in order undertake entrepreneurial activities (Frese & Gielnik, 2014). This kind of social network ties play a significant role in determining student intention to take up entrepreneurship as a career (Shafi, et al., 2019). Again, based on the research finding, this study is of the view that despite having EO, the individual students who are highly sociable easily make social network ties as compared to those individual students with poor social acquaintance. This findings, clarifies that EO alone in its composite form is not sufficient to predict EI. Hence, the study explicates the relevance of social network ties strategies, suggesting that an individual with active social networking can easily identify opportunities, acquire resources, and might have the stronger proclivity to start a new enterprise (Hallen & Eisenhardt, 2012; Frese & Gielnik, 2014). This finding is significant against the background of earlier studies that revealed that between 40% and 50% of business start-ups received their business ideas via social contact (Barringer and Ireland, 2019).

Implications

In theoretical view, this research has added to the extant literature on EI via examination the relevance of EO at individual-level instead of firm-level strategic standpoint (Baluku et al., 2018). Based on TPB (Farooq, 2016; Ajzen, 1991) this current enquiry has empirically added social network ties as a mediating variable that connects EO to EI (Sigmund et al., 2015). Moreover, this study has successfully and empirically used the aggregate latent construct i.e. EO to link social network ties as a mediator to EI relationship. This unique association is still limited in the scholarly discourse of entrepreneurship (Shafi et al., 2019). Finally, the present research has addressed the urgent call for investigation to probe how EO relates to EI by incorporating additional mediating variables (Hassan et al., 2021; Mahfud et al., 2019).

Promoting entrepreneurial intention in university graduates have been a herculean challenge among most of the universities in sub Saharan Africa particularly, Ghana. Thus, some researchers have even advocated for an urgent need to focus entrepreneurship education and training on exposing students to productive entrepreneurial curriculum moderated by practical oriented student-centered teaching methods (Nunfam et al. 2022). However, very limited was known about EO and the significance role of social network ties needed by the university students to start a new business. This research enquiry offers several practical insights and understanding of EO and SOT in determining universities students' entrepreneurial intention. The findings indicate that EO has positive and significant influence on SOT and EI, which suggests that individual university student with high level of EO is more likely to have high level of EI. These findings unearth a novel insight of research for scholars in the entrepreneurship discipline.

The study assists the development of policies that promote entrepreneurship and enterprise development. Additionally, this research is relevant to other similar universities to promote and deliver entrepreneurship education focusing on EO and developing entrepreneurial mindset among students that will eventually stimulate their EI. In order words, the findings suggest that the kind of entrepreneurship education to be provided should not be overly theoretically centered but rather exposing students to practical real-life problem solving, thereby creating avenue for students to be more creative and innovative in generating ideas. Moreover, this study also suggests that entrepreneurship training should offer students the opportunity to develop a networking platform including leveraging of social media, physical and online networking fora for the unique purposes of identifying and building exclusively beneficial social networks for business conversation. Finally, for the study to employ

structural equational modeling, specifically using PLE-SEM approach, exhibits more rigor and current methodological approach to augment entrepreneurship theory building process (Farooq et al., 2018).

Limitations and future scope of study

Though this research makes a significant contribution to the existing literature specifically on entrepreneurship and enterprise development. However, it is not free from limitations. This study examined EO construct in its aggregate form, future studies can unravel the distinct dimensional impacts of EO on the outcome variable (EI). Also, the sample used was limited to students of KNUST, Ghana, future studies can broaden the sample size to bring on board other students from sister universities. Lastly, since the respondents selected for the study was based on convenience sampling technique, future research can mitigate sample bias by employing simple random sampling technique.

Competing interest statement

There is no competing interest among authors as far as this study is concerned.

Author (s) Contribution Statement

Joseph Owusu contributed to the conception and design of the study. Joseph Owusu, Peter Kwasi Oppong, and Wilberforce Owusu-Ansah wrote the introduction and literature section, Naeem Hayat, Joseph Owusu, and Peter Kwasi Oppong organized the database, performed the statistical analysis and interpreted the results. Wilberforce Owusu-Ansah, Naeem Hayat and Joseph Owusu fits the study according to academic structure. All authors contributed to manuscript revision, read, and approved the submitted version.

References

Ali, F. (2016). Hotel website quality, perceived flow, customer satisfaction and purchase intention. *Journal of Hospitality and Tourism Technology 7* (2), 213-228. https://doi.org/10.1108/JHTT-02-2016-0010

Anwar, I, Saleem I, & Islam K.B. (2020). Entrepreneurial intention among female university students: examining the Moderating role of entrepreneurial education. *Journal for International Business and Entrepreneurship Development 12*(4), 217–234.

Baluku, M. M, Kikooma, J. F. & Otto, K. (2018). Positive mind set and entrepreneurial outcomes: the magical contributions of psychological resources and autonomy. *Journal of Small Business and Entrepreneurship* 30 (6), 473-498. https://doi.org/10.1080/08276331.2018.1459017

Barringer, B.R. and Ireland, R.D. (2019). *Entrepreneurship: successfully launching New Ventures*, Pearson Education Limited, New York, NY, 6th edition, Global Edition

Becker J.M, Klein K, & Wetzels M. (2012). Hierarchical latent variable models in PLS-SEM guidelines for using reflective-formative type models. *Long Range Planning*. 45(5/6), 359-394.

Biraglia, A. & Kadile, V. (2017). The role of entrepreneurial passion and creativity in developing entrepreneurial intentions insights from American Home brewers. *Journal of Small Business Management 55* (1), 170-188. DOI: 10.1111/jsbm.12242

Boahemaah, L., Xin, L., Dobge, C.S.K., and Pomegbe, W.W.K. (2020). The Impact of Entrepreneurship Education on the Entrepreneurial Intention of Students in Tertiary Institutions, *International Journal of Management, Accounting and Economics 7* (4), 2383-2126

Bolton, D. L. & Lane, M.D. (2012). Individual entrepreneurial orientation: development of a measurement instrument. *Education and Training 54*(2/3), 219-233. https://doi.org/10.1108/00400911211210314

Brunel, O, Laviolette, E.M. & Radu-Lefebvre, M. (2017). Role models and entrepreneurial intention: the moderating effects of experience, locus of control and self-esteem. *Journal of Enterprising Culture 25*(2), 149-177. https://doi.org/10.1142/S0218495817500066

Chen, S. C. Hsiao, H.C. Chang, J. C. Chou, C. M. Chen, C.P. & Shen, C.H. (2015). Can the entrepreneurship course improve the entrepreneurial intentions of students? *International Entrepreneurship and Management Journal 11* (3), 557-569. https://doi.org/10.1007/s11365-013-0293-0

Chin, W.W. (2010). How to write up and report PLS analyses in Esposito Vinzi, V., Chin, W.W., Henseler, J. and Wang, H. (Ends), Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields, Springer, Berlin and Heidelberg, 655-690.

Farooq, M. S, (2016). Social support and entrepreneurial skills as antecedents of entrepreneurial behaviour. PhD thesis, Universiti Malaysia Sarawak (UNIMAS), Sarawak.

Farooq, M.S (2018). Modelling the significance of social support and entrepreneurial skills for determining entrepreneurial behaviour of individuals: a structural equation modelling approach. *World Journal of*

Entrepreneurship, Management and Sustainable Development 14, 1-35. https://doi.org/10.1108/WJEMSD-12-2017-0096

Farooq, M. S & Radovic-Markovic, M. (2016). Modelling entrepreneurial education and entrepreneurial skills as antecedents of intention towards entrepreneurial behaviour in single mothers: a PLS-SEM approach", paper presented at the Fifth International Conference, Employment, Education and Entrepreneurship: Types, Current Trends and Future Perspectives, Faculty of Business Economics and Entrepreneurship, University of Belgrade, Belgrade, 198-216.

Farooq, M.S, & Radovic-Markovic, M. (2017). Impact of business simulation games on entrepreneurial intentions of business graduates: a PLS-SEM approach", Organisational Behaviour and Types of Leadership Styles and Strategies in Terms of Globalization, presented at the Sixth International Conference "Employment, Education and Entrepreneurship", Compass Publishing, Newton Abbot, and Belgrade,11-24.

Fornell, C, & Larcker D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research 18*(1), 39-50. http://www.jstor.com/stable/3151312

Frese, M, & Gielnik, M.M. (2014). The psychology of entrepreneurship. *Annual Review of Organizational Psychology and Organizational Behaviour 1* (1), 413-438.

Gage, R.P. (2012) Risky is the New Safe: The Rules Have Changed, Wiley, USA ISBN: 978-1-118-48147-9

Gupta, V.K. & Gupta A. (2015). Relationship between entrepreneurial orientation and firm performance in large organizations over time. *Journal of International Entrepreneurship 13*(1), 7-27. https://doi.org/10.1007/s10843-014-0138-0

Hafeez, S. Siddiqui, Z.U. & Rehman, K.U. (2011). The effect of market and entrepreneurial orientation on firm performance. *Information Management and Business Review 3*(6), 389-395.

Hassan, A. Anwar, I, & Saleem I. (2021). Individual entrepreneurial orientation, entrepreneurship education and entrepreneurial intention: The mediating role of entrepreneurial motivation. *Industry and Higher Education* 35(4), 403-418, https://doi.org/10.1177/09504222211007051

Hassan, A. Saleem, I. & Anwar I. (2020). Entrepreneurial intention of Indian university students: the role of opportunity recognition and entrepreneurship education. *Education þ Training 62*(7/8), 843-861. https://doi.org/10.1108/ET-02-2020-0033

Hallen, B.L. & Eisenhardt, K.M. (2012). Catalysing strategies and efficient tie formation: how entrepreneurial firms obtain investment Ties. *Academy of Management Journal 55* (1), 35-70. https://doi.org/10.5465/amj.2009.0620

Hair, J.F. Risher, J. J. Sarstedt, M. & Ringle, C.M. (2019). When to use and how to report the results of PLSSEM. *European Business Review 31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

Heavey, C. Simsek, Z. & Fox, B.C. (2015). Managerial social networks and ambidexterity of SMEs: the moderating role of a proactive commitment to innovation. *Human Resource Management 54* (1), 201-221.

Henseler. J. Ringle C.M. & Sarstedt M. (2015). A new criterion for assessing discriminant validity in variance based structural equation modelling. *Journal of the Academy of Marketing Science 43*(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8

Henry, C., Hill, F., & Leitch, C. (2005). Entrepreneurship education and training: can entrepreneurship be taught? Part I. *Education Training, 47*(2), 98-111. https://doi.org/10.1108/00400910510586524

Ibrahim, N.A, and Lucky EOI (2014). Relationship between entrepreneurial orientation, entrepreneurial skills, environmental factor and entrepreneurial intention among Nigerian students in UUM. *Entrepreneurship and Innovation Management Journal 2*(4), 203-213.

Ikpesu, O.C. (2016). University-industry linkages as determinant of students' entrepreneurial orientation in rivers state public universities. *Advances in Social Sciences Research Journal 3*(13), 109-118.

International Multidisciplinary Scientific Conferences on Social Sciences and Arts (MUNI/A/1242/2014)

Karimi, S. Biemans, H.J. & Lans, T. (2016). The impact of entrepreneurship education: a study of Iranian student's entrepreneurial intentions and opportunity identification. *Journal of Small Business Management 54*(1), 187-209.

Kolvereid, L. & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of Business Venturing, 21* (6), 866-885. https://doi.org/10.1016/j.jbusvent.2005.06.008

Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship theory and practice, 21*(1), 47-58.

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

Linan, F. & Chen, Y.W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33* (3), 593-617. https://doi.org/10.1111/j.1540-6520.2009.00318.x

Lortie, J. & Castogiovanni, G. (2015). The theory of planned behaviour in entrepreneurship research: what we know and future Directions. *International Entrepreneurship and Management Journal 11* (4), 935-957.

Lumpkin, G.T. & Dess, G.G. (2001). Linking two dimensions of Entrepreneurial orientation to firm Performance: the moderating role of environment and industry life cycle. *Journal of Business entering* 16, 429-451

Lerner, M. Brush, C. & Hisrich, R. (1997). Israeli women entrepreneurs: An examination of factors affecting performance. *Journal of Business Venturing* 12, 315-339.

Mahfud, T. Triyono, M.B. Sudira, T. & Mulyani, Y. (2019). The influence of social capital and entrepreneurial Attitude orientation on entrepreneurial intentions: the mediating role of psychological capital. *European Research on Management and Business Economics* 5(2), 33-42. https://doi.org/10.1016/j.iedeen.2019.12.005

Martins, I. & Perez, J. P. (2020). Testing mediating effects of individual entrepreneurial orientation on the Relation between close environmental factors and entrepreneurial intention. *International Journal of Entrepreneurial Behavior & Research* 26(4), 771-791. https://doi.org/10.1108/IJEBR-08-2019-0505

Mastercard Foundation (2017). Young Africa Works, MasterCard Foundation Strategy 2018-2030**.** https://www.businessnewsdaily.com (visited 7th August 2022).

Miralles, F. Giones, F. & Riverola C. (2015). Evaluating the impact of prior experience in entrepreneurial intention*. International Entrepreneurship and Management Journal* 12 (3), 791-813.

Miller, D. (1983). The correlates of entrepreneurship of three types of firms. *Management Science,* 29, 770-791

Morris, M. H., Santos, S. C., & Neumeyer, X. (2020). Entrepreneurship as a solution to poverty in developed economies. Business Horizons, 63(3), 377-390, https://doi.org/10.1016/j.bushor.2020.01.010.

Nunfam, V.F., Asitik, A.J, & Ebenezer Afrifa-Yamoah, E. (2022). Personality, Entrepreneurship Education and Entrepreneurial Intention Among Ghanaian Students, *Entrepreneurship Education and Pedagogy*, 5(1), 65-88. https://doi.org/10.1177/2515127420961040

Ozaralli, N. & Rivenburgh, N.K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behaviour in the USA and Turkey. *Journal of Global Entrepreneurship Research* 6 (1), 2-10.

Perez-Perez. G. Gonzalex-Torres T. & Sanchez J.J.N. (2021). Boosting entrepreneurial intention of University students: Is serious business game the key. *The International Journal of Management studies*, 54(8), 101-108. https://doi.org/10.1016/j.ijme.2021.100506

Podsakoff, P.M. & Organ, D.W. (1986). Self-reports in organizational research: problems and prospects. *Journal of Management* 12(4), 531-544. https://doi.org/10.1177/014920638601200408

Quan, X. (2012). Prior experience, social network, and levels of entrepreneurial intentions. *Management Research Review*, 35 (10), 945-957. https://doi.org/10.1108/01409171211272679

Robinson, S. & Stubberud, H.A. (2014). Elements of entrepreneurial orientation and their relationship to entrepreneurial intent. *Journal of Entrepreneurship Education* 17(2), 1-11.

Radovic-Markovic, M. Farooq M.S. & Markovic D. (2017). Strengthening the resilience of small and medium-sized enterprises paper presented at the Management, Enterprise and Benchmarking in the 21st Century, Management, Enterprise and Benchmarking in the 21st Century IV, Óbuda University, Budapest, 345-356.

Sahoo S. & Panda R.K. (2019). Exploring entrepreneurial orientation and intentions among technical university students: role of contextual antecedents. *Education and Training* 61(6), 718-736. https://doi.org/10.1108/ET-11-2018-0247

Santos, S. C., Neumeyer, X., & Morris, M. H. (2019). Entrepreneurship education in a poverty context: An empowerment perspective. *Journal of Small Business Management*, 57(1), 6-32. https://doi.org/10.1111/jsbm.12485

Semrau, T. & Werner, A. (2014). How exactly do network relationships pay off? The effects of network size and relationship quality on access to start-up resources. *Entrepreneurship Theory and Practice* 38 (3), 501-525. DOI: 10.1111/etap.12011

Shafi, K. Mohammadi, A. & Johan S.A. (2019). Investment ties gone awry *Academy of Management Journal* Early Cite.

Sigmund, S. Semrau, T. & Wegner, D. (2015). Networking ability and the financial performance of new ventures: moderating effects of venture size, institutional environment, and their interaction. *Journal of Small Business Management* 53 (1), 266-283. https://doi.org/10.1111/jsbm.12009

Tomy, S. & Pardede, E. (2020). An entrepreneurial intention model focussing on higher education. *International Journal of Entrepreneurial Behaviour & Research* 26(7), 1423-1447. https://doi.org/10.1108/IJEBR-06-2019-0370

Yun, Y.J. & Lee, K.J. (2017). Social skills as a moderator between R&D personnel's knowledge sharing and job performance. *Journal of Managerial Psychology* 32 (5), 387-400. https://doi.org/10.1108/JMP-05-2016-0156

Záthurecký, V & Marinič, P. (2015). Motivation of youth to be self-employed in the means of Start-up, SGEM 2015

Zacher, H. & Frese, M. (2018). Action regulation theory: foundations, current knowledge, and future directions. The SAGE Handbook of Industrial, Work and Organizational Psychology, 2, Sage, Thousand Oaks, CA, 80-102

Zhao, H. Seibert, S.E & Lumpkin G.T. (2010). The relationship of personality to entrepreneurial intentions and performance: a meta-analytic review. *Journal of Management* 36(2), 381-404. https://doi.org/ 10.1177/0149206309335187

Zhao, X. (2005). Active development of social networks and relationships to Chinese small and micro business owners' success Doctoral dissertation, Universitätsbibliothek, Giessen Zimmer, C. (1986). Entrepreneurship through Social Networks, Ballinger, Cambridge, MA.