

ACHIEVING ENTREPRENEURIAL INTENTION THROUGH ENTREPRENEURIAL ORIENTATION; SOCIAL NETWORK TIES AND MARKET INTELLIGENCE GENERATION PERSPECTIVES

Joseph Owusu, Kwame Nkrumah University of Science and Technology

Naeem Hayat, University Malaysia Kelantan

Wilberforce Owusu-Anasah, Kwame Nkrumah University of Science and
Technology

Peter Kwasi Oppong, Kwame Nkrumah University of Science and Technology

Solomon Zaato Gbene, University Malaysia Kelantan

ABSTRACT

Entrepreneurial orientation (ENO), social network ties (SOT) and market intelligence generations (MIT) are independently modeled as distinct antecedents of entrepreneurial intention (EIN). However, the intervening variables for such models are typically under-explored in their applicability to university students in the sub-Saharan Africa. Accordingly, drawing on the theory of planned behavior (TPB), the present study argues that ENO impacts on EIN and this impact is largely explained by SOT and MIT. Using cross-sectional data gathered from university students in Ghana, a sub-Saharan Africa country, our findings reveal that ENO has both direct and indirect relationship with EIN. Thus, this relationship is particularly mediated when students build and develop social network ties (SOT) instead of gathering marketing intelligence (MIT).

Keywords: Entrepreneurial Orientation, Entrepreneurial Intention, Market Intelligence Generation, Social Network Ties, Ghana.

INTRODUCTION

Over the past years researchers have always been concerned about researching to identify and find solutions to why most individuals failed to pursue their own ideas in order to become successful entrepreneurs (Hyder & Lussier, 2016). Ghana, an emerging economy in the sub-Saharan Africa faces the same predicament. Existing literature considers both environmental (Martins & Perez, 2020) and micro-level (Bilal et al., 2016) factors and their association with entrepreneurial intention (EIN). Evidence abounds that the micro-level factors particularly personality and demographic characteristics dominate compared to entrepreneurial psychological factors (Frese & Gielnik, 2014; Baluku et al., 2018). It is important to point out that individual entrepreneurial orientation is considered as a significant micro level psychological element less explored in the entrepreneurship discipline. Past studies have established a positive link between ENO and EIN (Martins & Perez, 2020). However, the understanding of the mediating role in this link requires further and better explanation (Krauss et al., 2005).

To secure better explanation in entrepreneurship literature (Frese & Gielnik, 2014), this study chooses the theory of planned behavior to open the black box. It is established that TPB theory remains the major intention-based theory that provides support to entrepreneurial behavioral research. Besides, TPB is widely recognized in entrepreneurship literature as one of the most rational intention-based theoretical model for developing conceptual frameworks in exploring entrepreneurial behavior.

In this regard, we argue that individual social network ties and market intelligence generation capabilities could be significant factors to prospective university student's proclivity to start their own businesses. Thus, where students are actively engaged in building and developing strong social relations with business owners and other business stakeholders and have the opportunity to gather market information at the marketplace will facilitate informed decisions concerning entrepreneurial behavior's (Grewal et al., 2017). Individual students with high sense of ENO have the tendency to be innovative, proactive, risk-taking, autonomy and competitive aggressive (Krauss et al., 2005) and these attributes in collective terms make an individual much stronger and more prepared to take initiative, build and develop a successful enterprise (Shafi et al., 2019).

In an emerging economy, such as Ghana, confronted with high rate of graduate unemployment and underemployment, social network ties in any form and relevant business intelligence from the marketplace could play an essential role in developing our tertiary graduates to establish for themselves stable jobs to mitigate the unemployment and underemployment canker facing the country. To overcome these socio-economic challenges, social networking strategies and the assimilation of relevant market intelligence from the marketplace act as an antecedent to the acquisition of the needed resources to start a business venture (Sigmund et al., 2015). Social network strategies coupled with market intelligence generation of an individual student are crucial sine qua non in the identification of business opportunities and the subsequent pursuit of entrepreneurial behaviour. In this aspect, individual students should build social networks and generate relevant market information from the marketplace to enhance their business adventure. Moreover, social network strategy and market intelligence generation capability of an individual can act as mechanisms for identification and exploitation of business opportunity (Hallen & Eisenhardt, 2012; Vissa, 2012). Additionally, beyond expanding the research by indicating that social network ties and marketing intelligence generation mediate the relationship between ENO and EIN, we also aim to have a better understanding of EIN phenomenon and make a significant contribution to the TPB theory.

The study has several contributions to entrepreneurship discipline. First, the study highlights micro-level psychological construct of individual entrepreneurial orientation (ENO) as a significant driver of entrepreneurial intention (EIN) in contrast to much examined environmental and other micro-level factors such as personality and demographic characteristics. Second, from the standpoint of entrepreneurship behavior, the study unlock the black box by introducing social network ties and market intelligence generation as mechanisms through which ENO relates to EIN. Finally, the study extends the TPB theory to the local context of sub-Saharan Africa, particularly among university students in Ghana. This is how the present paper is outlined. First and foremost, the study literature is reviewed and hypotheses developed. Second, we present the study proposed conceptual framework. Third, we outline the research method, analysis, and findings. Lastly, we elaborate on the study implications both theoretical and practical.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Entrepreneurial Orientation (ENO) and Social Network Ties (SOT)

Past literature has established a positive link between ENO and SOT (Frese, 2009). Also, it has been indicated in the literature that one of the fundamental attitudes that shape certain behaviours of an entrepreneur is social network ties (Frese & Gielnik, 2014). This suggests that

Instead of an entrepreneur becoming a victim of the existing social network (Frese, 2009), entrepreneurs with high levels of ENO rather use the existing social network to their advantage by deriving from the network relevant business information and resources (Sigmund et al., 2015). Based on this standpoint, it can be argued that the importance of social network strategy cannot be overlooked. Thus, most individuals depend on both informal network such as friends and family and formal network such as professional bodies and other institutions to recognize and exploit business opportunities (Hallen & Eisenhardt, 2012).

It is believed that a critical look at the various ENO components help contributing in building business social network ties. For instance, individual innovation capability assists him to be more creative in identifying beneficial social network ties that can support the expansion and growth of one's venture. In this current study, we argue that individual with high levels of ENO will be more influential when it comes to identifying, building and developing social network strategies. Relying on the above arguments, we hypothesized that;

H₁: Student entrepreneurial orientation positively affects social network ties.

Entrepreneurial Orientation (ENO) and Marketing Intelligence Generation (MIT)

ENO represents individual ability to recognize new business opportunities at the marketplace (Lumpkin & Dess, 1996). This manifest through the individual capability to be innovative, proactive, competitive aggressiveness, autonomy and the propensity to take risk (Lumpkin & Dess, 1996). Hence, ENO depicts an individual opportunity-seeking orientation including identification of marketplace that offers future business advantage to the individual (Wiklund & Shepherd, 2011). Market intelligence generation (MIT) refers to social, economic and technical information obtained from the marketplace (Cadogan et al., 1999). Market intelligence generation helps individual to make informed decisions regarding entrepreneurial behavior. In this regard, we argue that ENO and MIT are individual separate capabilities that may drive entrepreneurial behavior. It is also established that ENO and MIT enhance individual entrepreneurship intention (Atuahene-Gima & Ko, 2001; Cadogan et al., 1999; Hughes & Morgan, 2007). With emphasis on exploratory activities, it can be argued that individuals who are highly entrepreneurial-oriented may be capable of generating more relevant business information from the marketplace. Following the above arguments, we hypothesized that;

H₂: Student entrepreneurial orientation positively affects market intelligence generation.

Social Network Ties (SOT) and Entrepreneurial Intention (EIN)

Social network ties are explained as the degree of individual connectedness with different groups of people both formal and informal in the community. Individuals who are highly connected stand the chance of benefiting from social, market, technology and other human-based assets that offer assistance towards building entrepreneurial behavior (Ali, 2016; Biraglia & Kadile, 2017). Thus, individuals with strong social network ties are more likely to acquire essential social network resources to pursue their entrepreneurial activities. Entrepreneurial intention (EIN) depicts the degree of individual perceived desirability, commitment and determination to start a new business.

According to Sahoo and Panda (2019), EIN develops individual entrepreneurial competencies comprising innovation, creativity and effective leadership. In tandem with TPB theory, individual intention to start a new business is manifested in one's behavior. Previous study has established that social networking accelerates the success of entrepreneurial intention (Quan, 2012). Moreover, it is

found that social networking and entrepreneur's performance have significant relationship (Semrau & Werner, 2014). Accordingly, we are of the opinion that social networking ties and entrepreneurial intention are positively related. We therefore hypothesized that;

H₃: Social network ties positively affect entrepreneurial intention

Market Intelligence Generation (MIT) and Entrepreneurial Intention (EIN)

Market intelligence generation refers to the collective business information regarding social economic and technical gathered at the marketplace (Cadogan et al., 1999). Marketplace information is essential to individuals who aspire to become entrepreneurs simply because it aids in making decisive decisions and setting realistic business goals (Grewel et al., 2020). Past scholarly researchers (e.g. Grewel et al., 2020; Grewel et al., 2017) emphasized on the increased need of marketplace information by individuals who aspire to become entrepreneurs. On the other hand, EIN denotes an individual perceived intention to start a new venture (Thompson, 2009). EIN depicts the individual proclivity and willingness to create a new business. However, it is important to note that market intelligence generation reduces the challenges and the rate of failure in beginning a new venture (Grewal et al., 2020). In accordance with the above arguments, we argue that market intelligence generation forms an integral part of individual informational resources availability in developing entrepreneurial intention. We posited that;

H₄: Market intelligence generation positively affects entrepreneurial intention

Entrepreneurial Orientation (ENO) and Entrepreneurial Intention (EIN)

Recently various studies have identified entrepreneurial orientation as an important construct in the entrepreneurship literature (Hassan et al., 2020; Martins & Perez, 2020). The word entrepreneurial orientation (ENO) originated by Miller (1983), and was further developed by Lumpkin and Dess (1996). It represents the various traits of individual behavior's that assist the individual in identifying and exploiting business opportunities (Lumpkin & Dess 1996). This study conceptualized ENO as individual unidimensional construct as validated by Covin and Wales (2019) as compared to multi-dimensional construct confirmed and validated. An individual intention and behaviour geared toward entrepreneurship tend to depicts elements linked to ENO (Goktan & Gupta, 2015). These characteristics portray by individual entrepreneurs significantly differ from their conservative counterpart's in terms of creativity, idea generations and innovativeness (Krauss et al., 2015).

Accordingly, we argue that an individual who possesses high sense of entrepreneurial characteristics will exhibit proclivity to start one's own new venture (Boltan & Lane, 2012). Thus, ENO is highly associated with EIN. Hence, it is in our outmost expectation that individuals inclined with orientation such as innovativeness, proactiveness, risk-taking propensity, competitive aggressiveness, and autonomy may prefer to start their own new enterprises as suggested by Koe (2016). Relying on the above arguments, hypothesized that;

H₅: Individual entrepreneurial orientation is positively related to entrepreneurial intention.

Entrepreneurial Orientation (ENO), Social Network Ties (SOT) and Entrepreneurial Intention (EIN)

The interaction between individuals and their social network ties play an essential role in the development of EIN (Frese & Gielnick, 2014). To the extent that the kind of social network ties individual has with one's reference social group of people may have positive or negative impact toward entrepreneurial intention (Santos et al., 2016). This is because social network ties particularly with reference group influence individual behaviour (Ajzen, 1991). This influence through social networking can reflect in the intention outcomes of creating new business. As demonstrated the relationship between ENO and EIN has been established in the literature (Hassan et al., 2020). Based on this demonstration, we believe that applying social network ties in pursuing individual entrepreneurial intention cannot be overlooked. Because individual network plays an important role in the identification of opportunities and securing adequate resources to start a new business (Hallen & Eisenhardt, 2012).

According to Shafi et al. (2019), the ability of an individual to actively search, identify, build and develop unique social network ties on its own is paramount for creating a new enterprise. Essentially, ENO contributes significantly to social network strategies such as creativity and innovativeness which subsequently aid individual to easily spot and establish network links with others (Gurel et al., 2010). Additionally, pro-activeness, on the other hand helps individual to pre-determine with much certainty by aligning to good or bad network. While risk-taking propensity of individual determines the degree of risk mitigation associated with networks. Hence, we are of the firm believed that the association between ENO and EIN can be mediated by social network ties. Previous studies have highlighted that ENO enhances EIN (Hassan et al., 2020; Martins & Perez, 2020). However, in line with the arguments above, we specified that;

HM₁: Social network ties mediates ENO and EIN nexus

Entrepreneurial Orientation (ENO), Market Intelligence Generation (MIT) and Entrepreneurial Intention (EIN)

Market intelligence generation is considered as social, economic and technical information derived from the marketplace (Cadogan et al, 1991). However, individuals with sufficient market information are more likely to pursue entrepreneurial activities (Grewal et al., 2020). This study considers market intelligence generation as mediating variable, and continue to argue that market intelligence generation forms an integral part of an individual decision making process in an attempt to develop entrepreneurial intention. The present study views ENO as an individual orientation that assist one to recognise and exploit entrepreneurial opportunities (Lumpkin & Dess, 1996) Figure 1.

In accordance with TPB, individual planned behavior is predicted by intention (Ajzen, 1991; Donah et al., 2021). Thus, TPB serves as the foundational block that explains individual behaviour characterised by intention (Ajzen, 1991). Prior scholarly studies have established that ENO influences EIN (Martins & Perez, 2020; Hassan, et al., 2020). In this aspect, it can be argued that individuals with high levels of ENO may be satisfied and willing to embark on entrepreneurial activities. Past research has demonstrated that the relationship between close environmental factors and entrepreneurial intentions is mediated by individual entrepreneurial orientation (Martins & Perez, 2020). In line with these arguments, we are of the firm believed that market orientation can mediate ENO and EIN nexus. Following the above, we propose this hypothesis that;

HM₂: Market intelligence generation mediates the relationship between ENO and EIN

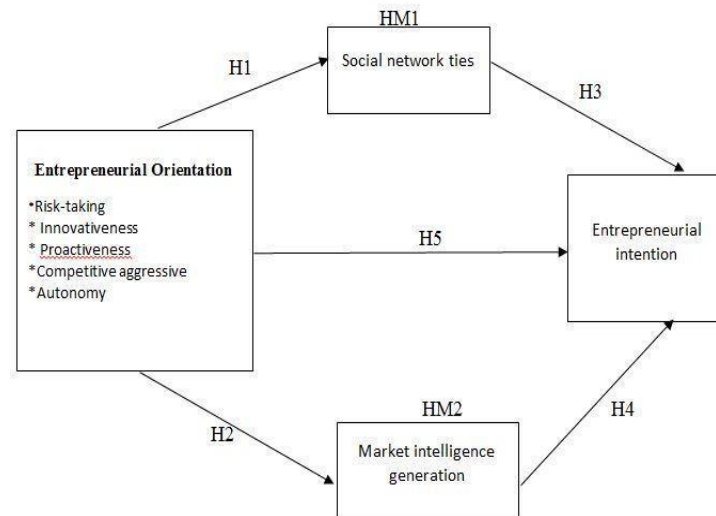


FIGURE 1
SOCIAL NETWORK TIES MEDIATES
RESEARCH METHOD

Participants and Procedures

To obtain diverse individual student entrepreneurial intentions, we took a convenient sample from Ghanaian university students. All participants of the study have had exposure to entrepreneurship education. We administered survey questionnaires to gather data for this study. To collect accurate and reliable data, the study paid particular attention to the language used in drafting the survey items. For instance, the questions asked were simple and precise, and every effort was made to avoid the usage of double-barreled questions.

However, methodologically, the study reduced common methods bias by separating each variable to stand independently. We also appealed to the respondents not to indicate any information that can reveal their identity on the questionnaire. Respondents were made aware that, the study is basically undertaken for academic purposes and therefore their involvement is voluntary. The sample used comprised of 728 participants. Of which 52.9 % and 47.1% were male and female respectively. Finally, 20.3% were diploma students, 64.4% were bachelor students and 15.1% were master students. Details are provided in Table 1.

Measurement and Scale

ENO- was measured in its composite form. Items used to measure ENO were adapted from Miller (1983), Lumpkin and Dess (2001), Lerner et al. (1997). 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). EIN- a ten- item measure by Bolton and Lane (2012) were utilized to measure EIN. 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”. Social network ties (SOT) a five-item measure from Zhao (2005) was used to measure SOT. Items include “I skillfully use intermediaries to introduce me to those people with whom I really want to associate.” Market intelligence generation (MIT) - a five-item measure

from Kola and Jaworski (1990) was used to measure MIT. These items include “*I quickly detect a fundamental shift in the market*”, and “*I am aware of information concerning the economic trend in the market*”. All variables measure items were anchored on seven-Likert scale, where 1 represents strongly disagree and 7 represents strongly agree.

DATA ANALYSIS

The demographic characteristics of the 728 respondents illustrated in Table 1.

	N	%		N	%
Gender			Marital Status		
Male	385	52.9	Single	550	75.5
Female	343	47.1	Married	178	24.5
Total	728	100	Total	728	100
Age Group			Education		
Below 21 years	129	17.7			
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				
Total	728	100	Total	728	100

Source: Authors data analysis

We utilized PLS-SEM analysis method to evaluate the current study’s data. Because of the non-normality issue in the data set the Smart PLS 3.1 technique was employed in assessing the model (Hair, Risher, Sarstedt, & Ringle, 2019). Data investigation was achieved in two phases, and the first phase estimates the latent construct reliabilities and validities. The Cronbach’s Alpha (CA), Dillion-Goldseins rho (DG-rho), and composite reliability (CR) were exploited to measure the reliabilities scores for the study latent constructs. Convergent validity was assessed using average variance extracted (AVE); the AVE score for each construct must be more than 0.50 to confirm the convergent validity. We applied the Fornell-Larcker criterion, the Heterotrait-Monotrait ratio, and the loading and cross-loading values (Henseler et al., 2015). The hypotheses testing were performed with the path coefficients with a confidence interval, *t*-value, and *p*-value (Hair et al., 2019).

The current study has the higher-order construct (HOC), i.e., ENO, which is based on five lower-orders, constructs (LOC) comprising of innovativeness, proactiveness, risk-taking, autonomy, and competitive aggressiveness. Since the HOC does not have an established score, we then need to compute the HOC score from the LOC. Currently, three assessment methods have been suggested to approximate HOC, i.e., repeated indicator, two-stage, and hybrid approach (Becker et al., 2012). Hair et al. (2019) suggested that among the three recommended approaches the two-stage approach is believed to provide better results compared to the other two approaches. In the first stage of analysis, all the LOC constructs were employed to achieve the latent factors scores, LOC scores for all the constructs were saved and utilized to estimate the HOC in the second stage of investigation (Becker et al., 2012). Hair et al. (2019) indicated that reporting the constructs' reliabilities and validities for stages one and two are necessary to establish the study regularities (Figure 2).

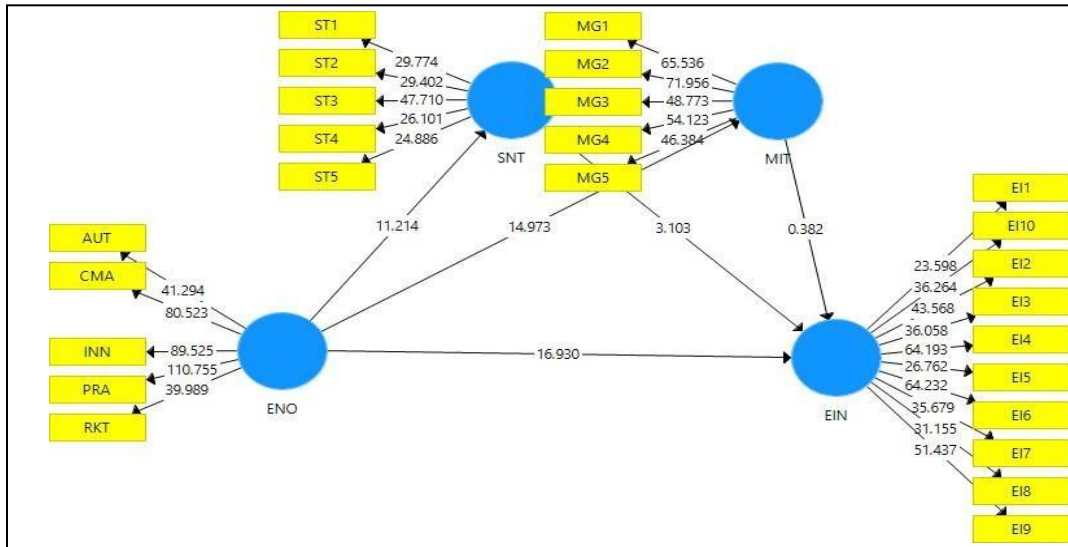


FIGURE 2
SEM MODEL

Stage 1 Analysis of (LOC)

To ascertain the HOC from the LOC, we run the stage 1 analysis with all LOC as postulated by Becker et al. (2012). The reliabilities for all LOC were assessed with the Cronbach’s alpha, composite reliability and Dillon–Goldstein’s. The result shows that all the reliabilities scores attain a value of more than 0.70, confirming the LOC reliabilities (Hair et al., 2019). The convergence validity gauged with the average variance extracted (AVE), the finding suggests that all the LOCs have sufficient convergent validities. Variance inflation factor (VIF) was utilized to estimate the construct level of suitability used. The VIF values are all under the 5.0 score, depicting no multicollinearity issue in the study model (Chin, 2010) (Table 2).

Variables	No. Items	CA	DG rho	CR	AVE	VIF
AUT	6	0.882	0.884	0.911	0.63	2.278
CMA	7	0.846	0.863	0.882	0.519	3.184
INN	8	0.888	0.89	0.911	0.561	3.439
PRA	8	0.911	0.913	0.928	0.618	4.223
RKT	7	0.859	0.868	0.892	0.544	2502
SOT	5	0.822	0.845	0.871	0.574	1.616
MIT	5	0.901	0.905	0.927	0.618	1.789
EIN	10	0.942	0.945	0.951	0.661	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis

The stage 1 result shows that the discriminant analysis works well at the stage 1 LOC analysis. The results are provided in Table 3 and Table 4.

Table 3 CONSTRUCT LEVEL DISCRIMINATE VALIDITIES (STAGE 1)								
	AUT	CMA	INN	PRA	PKT	SOT	MIT	EIN
Fornell-Larcker Criterion								
AUT	0.794							
CMA	0.709	0.72						
INN	0.635	0.733	0.749					
PRA	0.702	0.788	0.718	0.786				
PKT	0.572	0.642	0.715	0.696	0.737			
SOT	0.413	0.406	0.429	0.38	0.332	0.758		
MIT	0.459	0.495	0.513	0.451	0.597	0.601	0.846	
EIN	0.576	0.614	0.661	0.708	0.642	0.443	0.445	0.813
Heterotrait-Monotrait Ratio (HTMT)								
AUT	-	-	-	-	-	-	-	-
CMA	0.813	-	-	-	-	-	-	-
INN	0.716	0.818	-	-	-	-	-	-
PRA	0.782	0.806	0.904	-	-	-	-	-
RKT	0.657	0.729	0.861	0.778	-	-	-	-
SOT	0.454	0.475	0.411	0.399	0.379	-	-	-
MIT	0.513	0.568	0.522	0.495	0.478	0.705	-	-
EIN	0.63	0.661	0.718	0.762	0.645	0.471	0.483	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: 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	MIT	EIN
AUT – Item 1	0.759	0.583	0.517	0.558	0.48	0.328	0.42	0.484
AUT – Item 2	0.796	0.584	0.509	0.597	0.466	0.36	0.388	0.494
AUT – Item 3	0.789	0.526	0.514	0.547	0.459	0.292	0.311	0.428
AUT – Item 4	0.84	0.572	0.499	0.565	0.462	0.346	0.356	0.465
AUT – Item 5	0.829	0.577	0.513	0.57	0.437	0.332	0.363	0.469
AUT – Item 6	0.745	0.528	0.47	0.498	0.417	0.308	0.348	0.394
CMA – Item 1	0.54	0.786	0.62	0.696	0.526	0.33	0.363	0.529
CMA – Item 2	0.584	0.784	0.641	0.671	0.528	0.307	0.399	0.511
CMA – Item 3	0.515	0.748	0.596	0.658	0.51	0.215	0.289	0.531
CMA – Item 4	0.401	0.581	0.319	0.346	0.285	0.24	0.329	0.245
CMA – Item 5	0.493	0.732	0.451	0.487	0.402	0.33	0.402	0.354
CMA – Item 6	0.446	0.618	0.393	0.387	0.396	0.291	0.292	0.312
INN – Item 1	0.566	0.564	0.764	0.594	0.513	0.348	0.435	0.498
INN – Item 2	0.449	0.552	0.73	0.588	0.661	0.273	0.302	0.432
INN – Item 3	0.479	0.551	0.786	0.654	0.67	0.281	0.322	0.528
INN – Item 4	0.407	0.49	0.706	0.512	0.526	0.284	0.346	0.4
INN – Item 5	0.477	0.586	0.777	0.614	0.567	0.378	0.407	0.48
INN – Item 6	0.511	0.58	0.791	0.6	0.554	0.304	0.406	0.501
INN – Item 7	0.446	0.527	0.718	0.558	0.525	0.289	0.336	0.473
INN – Item 8	0.52	0.563	0.766	0.709	0.537	0.311	0.371	0.603
PRA – Item 1	0.505	0.536	0.663	0.713	0.499	0.258	0.326	0.525
PRA – Item 2	0.543	0.633	0.716	0.792	0.584	0.292	0.35	0.561
PRA – Item 3	0.57	0.654	0.701	0.838	0.597	0.317	0.36	0.577
PRA – Item 4	0.553	0.606	0.584	0.784	0.531	0.292	0.307	0.558
PRA – Item 5	0.548	0.604	0.618	0.743	0.463	0.286	0.337	0.492
PRA – Item 6	0.553	0.602	0.653	0.814	0.562	0.293	0.341	0.612

PRA – Item 7	0.522	0.593	0.619	0.767	0.517	0.308	0.4	0.542
PRA – Item 8	0.539	0.568	0.564	0.739	0.517	0.282	0.322	0.53
RKT – Item 1	0.586	0.69	0.676	0.526	0.808	0.32	0.415	0.579
RKT – Item 2	0.417	0.395	0.52	0.478	0.724	0.208	0.245	0.414
RKT – Item 3	0.388	0.399	0.483	0.452	0.695	0.178	0.216	0.424
RKT – Item 4	0.396	0.401	0.461	0.409	0.643	0.253	0.311	0.354
RKT – Item 5	0.476	0.555	0.622	0.592	0.78	0.261	0.33	0.456
RKT – Item 6	0.476	0.555	0.622	0.592	0.78	0.261	0.33	0.456
RKT – Item 7	0.447	0.526	0.645	0.582	0.818	0.256	0.374	0.497
SOT – Item 1	0.41	0.505	0.589	0.539	0.764	0.764	0.345	0.437
SOT – Item 2	0.418	0.498	0.562	0.508	0.305	0.728	0.357	0.411
SOT – Item 3	0.391	0.343	0.384	0.403	0.286	0.756	0.414	0.427
SOT – Item 4	0.239	0.283	0.274	0.214	0.23	0.756	0.481	0.264
SOT- Item 5	0.379	0.348	0.319	0.357	0.275	0.811	0.447	0.402
MIT – Item 1	0.226	0.242	0.208	0.159	0.196	0.387	0.738	0.216
MIT – Item 2	0.244	0.279	0.253	0.187	0.235	0.274	0.724	0.269
MIT – Item 3	0.418	0.462	0.452	0.399	0.39	0.518	0.852	0.409
MIT – Item 4	0.376	0.432	0.424	0.42	0.395	0.523	0.875	0.393
MIT- Item 5	0.416	0.401	0.396	0.384	0.334	0.517	0.838	0.389
EIN – Item 1	0.376	0.402	0.349	0.361	0.342	0.491	0.418	0.843
EIN – Item 2	0.352	0.393	0.356	0.336	0.335	0.491	0.25	0.825
EIN – Item 3	0.459	0.477	0.457	0.497	0.453	0.339	0.411	0.696
EIN – Item 4	0.463	0.504	0.578	0.612	0.46	0.386	0.335	0.828
EIN– Item 5	0.49	0.495	0.509	0.573	0.484	0.319	0.365	0.82
EIN– Item 6	0.418	0.449	0.492	0.516	0.451	0.411	0.396	0.79
EIN – Item 7	0.491	0.519	0.536	0.594	0.495	0.377	0.365	0.875
EIN – Item 8	0.418	0.431	0.457	0.505	0.438	0.346	0.347	0.755
EIN – Item 9	0.514	0.56	0.608	0.654	0.527	0.329	0.344	0.881
EIN – Item 10	0.46	0.497	0.554	0.571	0.438	0.359	0.321	0.806

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Pro-activeness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis.

Stage 2 analysis (HOC)

In the 2nd stage of HOC analysis, the Cronbach's alpha, composite reliability, and Dillon–Goldstein's rho scores for each construct have scores above 0.70, depicting that every construct has a sufficient level of internal consistency (Chin, 2010). Furthermore, Table 5 demonstrates that the average variance extracted (AVE) values were above 0.50, which proofs that the model attains convergent validity. The variance inflation factor (VIF) values for each construct were below the threshold of 5.0, indicating no issue of multicollinearity (Chin, 2010) (Table 6 and Table 7).

Variables	No. Items	CA	DG rho	CR	AVE	VIF
ENO	5	0.922	0.925	0.941	0.763	1.431
SOT	5	0.822	0.84	0.871	0.576	1.622
MIT	5	0.901	0.904	0.927	0.717	1.808
EIN	10	0.942	0.944	0.951	0.661	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis

CA: Cronbach's Alpha; D.G. ρ - Dillon-Goldstein's ρ ; C.R. - Composite Reliability; AVE - Average Variance Extracted; VIF - Variance Inflation Factors

	ENO	SOT	MIT	EIN
Fornell-Larcker Criterion				
ENO	0.874			
SOT	0.441	0.759		
MIT	0.526	0.602	0.846	
EIN	0.721	0.441	0.445	0.813
<i>Heterotrait-Monotrait Ratio (HTMT)</i>				
ENO	-			
SOT	0.48	-		
MIT	0.575	0.705	-	
EIN	0.771	0.471	0.483	-

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis

Code	ENO	SOT	MIT	ENI
AUT	0.82	0.419	0.462	0.565
CMA	0.89	0.403	0.493	0.618
INN	0.904	0.395	0.47	0.665
PRA	0.919	0.377	0.45	0.709
RKT	0.829	0.328	0.423	0.582
SOT1	0.415	0.75	0.413	0.427
SOT2	0.285	0.762	0.481	0.265
SOT3	0.386	0.806	0.447	0.402
SOT4	0.236	0.744	0.459	0.216
SOT5	0.275	0.728	0.522	0.27
MIT1	0.485	0.519	0.852	0.41
MIT2	0.469	0.523	0.875	0.393
MIT3	0.442	0.518	0.836	0.389
MIT4	0.418	0.492	0.843	0.343
MIT5	0.405	0.492	0.826	0.34
EIN1	0.537	0.338	0.41	0.697
EIN2	0.602	0.383	0.335	0.828
EIN3	0.584	0.317	0.365	0.82
EIN4	0.533	0.41	0.395	0.791
EIN5	0.604	0.374	0.365	0.875
EIN6	0.515	0.345	0.347	0.755
EIN7	0.657	0.327	0.344	0.881
EIN8	0.579	0.357	0.32	0.806
EIN9	0.592	0.365	0.361	0.799
EIN10	0.636	0.371	0.383	0.858

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis

2) The Italic values in the matrix above are the item loadings, and others are cross-loadings

Path Analysis

After achieving the adequate construct level reliabilities and validities scores, the study model subsequent measurement calculation was accomplished. The analysis reveals that ENO as an exogenous construct can explain 19.3% of the variance in the SOT for the study model. The path coefficient for entrepreneurial orientation ENO ($\beta = 0.441$; t -value = 11.214; $P = 0.000$) specifies a significant positive impact of ENO on SOT.

This finding confirms H1. The path coefficient of ENO ($\beta = 0.526$; t -value = 14.973; $P = 0.000$) confirms the positive and significant effect of ENO on the MIT. The study findings suggest accepting H2. The path coefficient for SOT ($\beta = 0.145$; t -value = 3.003; $P = 0.001$) specifies a significant positive impact of SOT on EIN and support H3. The path coefficient for MIT ($\beta = 0.016$; t -value = -0.351; $P = 0.351$) stipulates an insignificant positive effect of MIT on EIN. The finding rejects H4. The path coefficient of ENO ($\beta = 0.648$; t -value = 16.930; $P = 0.000$) approves the positive and significant effect of ENO on the EIN. The study finding suggests accepting H5. Table 8 presents the models' standardized path scores, t-values, and path significance levels.

Hypo		Beta	CI - Min	CI - Max	T	p	r ²	f ²	Decision
Factors affecting entrepreneurial intention									
H1	ENO → SOT	0.441	0.375	0.505	11.214	0	0.194	0.241	Accept
H2	ENO → MIT	0.526	0.468	0.583	14.973	0	0.277	0.383	Accept
H3	SOT → EIN	0.145	0.072	0.225	3.003	0.001		0.028	Accept
H4	MIT → EIN	0.016	-0.057	0.085	0.382	0.351		0	Reject
H5	ENO → EIN	0.648	0.583	0.711	16.93	0	0.539	0.636	Accept

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis.

Mediational Analysis

The mediational analysis was assessed to evaluate the mediational effect of SOT and MIT in ENO and EIN nexus. The result reveals that social network ties (SOT) significantly mediate the association between entrepreneurial orientation and entrepreneurial intention ($\beta = 0.064$; CI min = 0.032; CI max = 0.100; Sig. = 0.001) indicating the acceptance of HM1. The next finding exposes that market intelligence generation (MIT) insignificantly mediate the association between entrepreneurial orientation and entrepreneurial intention ($\beta = 0.009$; CI min = -0.030; CI max = 0.045; Sig. = 0.352) demonstrating non- acceptance of HM2. Results are represented in Table 9.

Hypo	Associations	Beta	CI - Min	CI - Max	t	P	Decision
HM1	ENO → SOT → EIN	0.064	0.032	0.1	3.087	0.001	Mediation
HM2	ENO → MIT → EIN	0.009	-0.03	0.045	0.38	0.352	Mediation

Note: AUT: Autonomy; CMA: Competitive aggressiveness, INN: Innovativeness; PRA: Proactiveness; RKT: Risk-taking; MIT: Market intelligence; SOT: Social network ties; ENO: Entrepreneurial orientation, EIN: Entrepreneurial intention.

Source: Author's data analysis

DISCUSSION

This research aimed at examining whether social network ties (SOT) and market intelligence generation (MIT) mediate the relationship between entrepreneurial orientation (ENO) and entrepreneurial intention (EIN). To achieve our aim, we model the effect of a configuration of ENO, MIT and SOT on the outcome variable EIN. The study result reveals that ENO positively and significantly affects SOT. This finding is in congruence with prior studies (e.g. Frese, 2009; Hallen & Eisenhardt, 2012; Sigmund et al., 2015), suggesting that individuals with good understanding of ENO stand a better chance to develop beneficial network strategies to identify and exploit business opportunities.

Moreover, our study found that ENO positively and significantly relate to market intelligence generation (MIT). This finding was not surprising because previous research indicates that prospective entrepreneurs demonstrate increased interest in market information in order to make decisive decisions relating to their entrepreneurial activities (Grewal et al., 2017; Grewal et al., 2020). Again, the study found a significant relationship between SOT and EIN. This finding confirms the assertion that individual social network strategy determines one's required resources needed to start a new business. The findings further explain why social networking accelerates the success of entrepreneurial activities among nascent entrepreneurs and also supports individual's capability to take advantage of ENO in order to undertake entrepreneurial activities (Quan, 2012; Frese & Gielnik, 2014). In consonance with past scholarly studies (e.g. Hassen et al., 2021; Adam & Fayolle, 2015), our study has added to the affirmation in the literature that ENO and EIN have significant association. Indicating that entrepreneurial-oriented individual may have pool of the necessary resources and exposure to identify and exploit business opportunities.

Besides, the study further examined the indirect effect of ENO and EIN through SOT and MIT. The study findings reveal that SOT mediates the association between ENO and EIN. The findings suggest that an individual with active social networking can easily identify opportunities, acquire resources and might have the strongest proclivity to start a new enterprise (Hallen & Eisenhardt, 2012; Frese & Gielnik, 2014). By extension, our study argues that individual university student can become a successful nascent entrepreneur when SOT is appropriately leveraged on. This new contribution to entrepreneurship literature suggests that the development of SOT increases the influence of ENO on EIN among individual university student.

The study again tested for the mediating role of MIT in ENO and EIN association. The results of our study reveal that MIT does not mediate ENO and EIN nexus. This can be attributed to the fact that in most developing economies because of fear of competition and lack of proper market information through marketing research, most market information are provided by the market players by word of mouth. Thus, the accuracy and reliability of the information gathered through MIT becomes tainted. As a result exclusive reliance of MIT may not be sufficient for establishing a new business.

THEORETICAL IMPLICATION

By the combination and integration of different factors of entrepreneurship such as ENO, EIN, SOT and MIT variables, this current study makes significant theoretical implication to entrepreneurship literature. First, the current research adds to the literature by empirically exploring ENO at individual university student level and subsequently linking to other important constructs like SOT, MIT and EIN.

Second, relying on TPB (Ajzen, 1991), this study has empirically added MIT and SOT as mechanisms through which ENO relates to EIN. This unique association is limited in entrepreneurship literature (Shafi et al., 2019).

Third, the study's methodological design allows verification of the relationships using a robust statistical technique and sample that augment the findings. Finally, this research provides a practical testimony from a developing country context, Ghana, thereby addressing the call for future studies to be carried out in different socio- economic settings (Thompson, 2009).

PRACTICAL IMPLICATION

This study basically offers two practical insights for policymakers. First, the current study offers a useful lesson for both individual university student and universities in developing countries, particularly Ghana. Policymakers in developing countries are increasingly interested in developing and promoting entrepreneurship mindset among the teeming youth to combat the high rate of unemployment and underemployment among the youth. However, the present study findings offers a useful information to design academic programmes by universities, policies and projects by the governments that will aim at strengthening individual university student creativity, innovativeness, pro-activeness and risk- taking propensity. This will also help to developing individuals capable of creating new businesses and recognize opportunities in already existing businesses.

Second, these study findings may possibly aid developing countries governments and other developmental agencies to allocate adequate resources to promote entrepreneurship education and training programmes to help the teeming youth to understand how to develop greater levels of ENO and EIN and how to establish strong business social network ties.

CONCLUSION AND FUTURE SCOPE OF STUDY

In this study, there are limitations to the generalization of its findings. There are numerous future research directions based on the outcome of the study findings. First and foremost, the present research paper model ENO as a composite construct predicting EIN by considering the mediating roles of MIT and SOT in the relationship. It is recommended that similar future empirical studies investigate into ENO in its decomposed form to provide further and better understanding on how the individual ENO components drive EIN.

Second, this study depended on non-probabilistic sampling technique, specifically convenience sampling technique for data collection. It is recommended that similar future research could consider simple random sampling which is probabilistic technique in nature, and whose results could be subject to generalization.

Third, the sample used was limited to university students from Ghana. Thus it is recommended that future studies can replicate the study by increasing the sample size to include students from other neighboring countries.

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