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## Article

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# Association between entrepreneurial orientation and the performance of small and medium enterprises in Ghana: the role of network ties

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## ABSTRACT

Small and medium enterprises (SMEs) in the informal sector are key in determining economic growth, particularly in low- and middle-income countries. However, data on the moderating effect of network ties on the association between SMEs' entrepreneurial orientation (EO) and performance are limited, particularly in Ghana. Guided by resource-based and network theories, this study examines the moderating role of network ties in the association between EO and firm performance among SMEs in Ghana. Data were obtained from 201 SME owner-managers through face-to-face questionnaire administration. Regressions showed that EO components (proactiveness, innovativeness, risk-taking propensity, and competitive aggressiveness) were significantly associated with the performance of SMEs. Interactions revealed that network ties significantly influenced entrepreneurial orientation and SMEs' performance associations. The network ties of SME owner-managers appeared to be a significant and positive moderator of the EO and SME performance link. Therefore, entrepreneurial orientation and network ties are important managerial resource capabilities needed for business survival in the informal sector.

## IMPACT STATEMENT

The study used a sample of 201 small and medium enterprises (SMEs) owners and managers to understand the contribution of network relations to the relationship between entrepreneurial orientation (being innovative, taking risk, engaging in competition, being autonomous, and proactive) and the performance of SMEs. We found that being innovative, taking risks, being competitive, and proactive improved SME performance. Social and business relationships established by SME owners and managers are also important in understanding the effect of entrepreneurial orientation on performance of SMEs.

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## 1. Introduction

In many developing countries, small and medium enterprises (SMEs) play a significant economic role, particularly in sub-Saharan African countries. SMEs make significant contributions to economic growth since these businesses not only improve a nation's GDP but also contribute to the reduction in unemployment, especially in Ghana (Asare, 2014a, 2014b). Hence, the role of SMEs is essential in enhancing the socio-economic advancement of a middle-income country like Ghana (Tee et al., 2016).

Regardless of the benefits and significance derived from SMEs globally and more specifically in Ghana, it has been established that SMEs are at risk of failing, with estimates indicating that three out of every five fails within the first six months of operation (Bowen et al., 2009). This is evident in emerging economies such as South Africa, which still face greater rates of SME failure (Msimango-Galawe & Urban, 2019). A similar pattern of failure has been concluded in Namibia, with a four-times higher likelihood of SME failure compared to the rate of established business (Mukata & Swanepoel, 2017). In addition, despite

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support from non-governmental and governmental agencies, Nigerian SMEs lack the maximum capacity to perform their traditional and historic roles as the cornerstone of home-grown and general economic progress, as has been the situation in America, Europe, and Asia (Alarape, 2014). The situation is not different from that of Ghana, where similar failures and business challenges have been identified (Asare, 2014a, 2014b). Yet, at the present pace of global development, entrepreneurial businesses need to adopt innovative strategies (such as competitiveness, new product development, and access to internal and external ideas), a major component of entrepreneurial orientation, and networking relations and resources to strive and survive in the face of challenges and failures (Asare, 2014a, 2014b; Fatoki, 2013) that characterised the informal business environment. These entrepreneurial orientations and network ties influence the competencies of SMEs to provide strategic approaches to operational quality (Constangioara & Laszlo, 2014).

Both the resource-based view and the network theory contend that entrepreneurial orientation and network connections are essential resources that SME owner-managers can use to achieve their entrepreneurial goals and superior performance (Harms, 2013; Udimal et al., 2021). These results imply that having adequate knowledge of EO and network ties might be essential in explaining the performance of SMEs (Le Roux & Bengesi, 2014). Yet, despite the significance of the EO and networks to the success and performance of SMEs, studies (e.g., Ahinful et al., 2019; Arthur-Aidoo et al., 2018; Debrah & Mmieh, 2009; Kyereboah-Coleman & Amidu, 2008; Oduro & Nyarku, 2016) on SMEs in Ghana are silent on these significant factors, with only a few (for example, Acheampong, 2017; Acheampong et al., 2017; Acheampong & Hinson, 2019) who separately focused on entrepreneurial orientation and network ties on industry choice of Ghanaian entrepreneurs and SMEs survival, respectively.

To the best of our knowledge, no study in Ghana has examined the moderating role of network ties in the association between entrepreneurial orientation and SME performance. To help improve the performance outcomes in the informal economic sector in Ghana and contribute to meeting the SDGs, more recent and contextual evidence is required to inform the Micro, Small, and Medium Enterprises (MSMEs) and Entrepreneurship policies and programmes. Therefore, this study examines the moderating role of network ties in the association of EO with firm performance among SMEs in Ghana.

## 2. Literature review and hypotheses

### 2.1. Entrepreneurial orientation and SME performance

Empirical studies (for example, Lekmat et al., 2018; Ribau et al., 2017) posit that the entrepreneurial orientation abilities of SMEs are central to superior performance in both local and international markets. According to the resource-based theory, entrepreneurial orientation is a rare, important, distinct, non-substitutable, and intangible resource. Such an orientation is heterogeneously characterised by innovation, proactivity, autonomy, risk-taking, and competitive aggressiveness (Barney, 2016; Iqbal & Malik, 2019; Wiklund & Shepherd, 2011). Previous studies have confirmed the resourceful role of entrepreneurial orientation in eliciting positive performance outcomes for SMEs. For instance, Martins and Rialp (2013) further found that EO positively influences a firm's profitability. Similarly, it has been discovered that characteristics of entrepreneurial orientation are significantly associated with performance. These authors found that competitive aggression, risk-orientation, and proactiveness explained 72 percent of the variance in SME performance (Le Roux & Bengesi, 2014). These findings are consistent with the results of Koloba (2017), and Bogatyreva et al. (2017) whose respective studies documented a statistically significant link between aspects of entrepreneurial orientation, including autonomy, creativity, and risk-taking, and SMEs' performance and firm growth. Other scholars (Costa & Borini, 2017; Poudel et al., 2018; Yoo & Kim, 2019) similarly identified from their studies that entrepreneurial orientation significantly affects the performance (innovation, marketing, and capabilities) of SMEs. Findings from these studies suggests that entrepreneurial orientation affects the performance of SMEs positively, hence, we hypothesise that:

*H<sub>1</sub> = Entrepreneurial orientation will significantly influence the performance of SMEs.*

### 2.2. Network ties and SME performance

While the association of entrepreneurial orientation with SME performance is well documented in the literature, an increasing number of studies have recognised the contribution of networking behaviours.

Ahmadian and Abdolmaleki (2018) posit that entrepreneurs need network ties to support their entrepreneurial orientation and be successful. In corroboration, Chen et al. (2015) results revealed that though entrepreneurial dimensions of innovation and proactiveness yielded positive firm performance, network connections strengthen this association. Small and medium-sized businesses network regularly, and their connections have a favourable influence on their strategic decisions and performance (Nyuur et al., 2016), since being embedded in inter-firm networks gives these business owners and managers access to numerous pools of knowledge and resources, allowing their businesses to strive in the face of challenges concerning their size (Burt, 2019). This is reinforced by Hernández-Carrión et al. (2017), who found that institutional and professional network resources impact SMEs' economic performance more than other forms of network resources. This is because an entrepreneur's network ties become a tactical resource used to develop competitive edges, which is considered social capital, or the worth contained in social interactions engaged in by individuals or groups (Aldrich & Kim, 2007; Gedajlovic et al., 2013). Thus, SME success is positively associated with linkages to networks because social capital and social networks enable resource acquisition that may be utilised to take advantage of entrepreneurial possibilities, resulting in increased performance and value creation (Aarstad et al., 2010; Baker & Nelson, 2005; Kotha & George, 2012). The implication of these findings is that entrepreneurs who lack social capital can compensate for this by forming close relationships with colleagues who have high social capital, and they can also help by imitating forms of networking relations developed by colleagues with successes, granting access to the same resources established in the niche. Founded on the theoretical arguments that network ties assist SMEs to broaden their opportunistic range of strategic actions, lower the cost of seeking complementary capabilities and resources, and reduce the volatility and risk of the business environment to yield superior performance outcomes (Hernández-Carrión et al., 2020; Hernández-Carrión et al., 2017; Liu & Yang, 2019), we hypothesise that:

$H_2$  = Network ties of SME owner-managers have a significant positive effect on the performance of SMEs.

### **2.3. Network ties as a moderator of entrepreneurial orientation and SME performance relationship**

The centrality of networks to finding new possibilities, obtaining resources, and acquiring legitimacy cannot be downplayed, since they could function as a protection against global market volatility (Elfring & Hulsink, 2007; Madsen, 2007). As a result, people in social networks have the power to influence one another's willingness to take risks or not (Martins, 2016), which is a component of entrepreneurial orientation. In essence, an entrepreneurially oriented SME owner or manager actively seeks opportunities and innovative ways to make use of such prospects. But when these SME owners or managers lack network ties, it reduces their access to vital domain information or knowledge as well as other crucial resources embedded in such networks, thereby weakening the performance outcomes of entrepreneurial orientation (Hitt et al., 2001).

For entrepreneurs to achieve desired results, they must acquire, create, and exploit resources that generate both opportunity-seeking and advantage-seeking behaviours (Chen et al., 2015). Small and medium-sized businesses (SMEs) could benefit from this because they could share information and ideas with other members, allowing their present ideas to be re-examined, questioned, and improved by other contemporaries (Perry-Smith, 2006). Hence, entrepreneurial orientation enhances creative performance when it is accompanied by strong ties to one's company's internal bonding networks and connections to senior management, according to empirical evidence from recent research (Tang et al., 2015). This was confirmed in a study involving 121 manufacturing SMEs in Spain that identified that reliance on networks had a favourable influence on entrepreneurial orientation development (Martins, 2016). Therefore, the study argues that:

$H_3$  = SME owners and managers' network ties will significantly moderate the association between entrepreneurial orientation and the performance of SMEs.

## **3. Research methods**

Using a descriptive quantitative case study design, the study analyses entrepreneurial orientation and network ties as determinants of the performance of SMEs in Ghana. The descriptive case study design

helped in revealing the associations between network ties, entrepreneurial orientation, and SME performance (Chmiliar, 2012) by employing some statistical techniques and analyses.

### **3.1. Sampling procedure**

The study recruited SME owner-managers, with much emphasis on those located in urban areas of Ghana. A population of 5,776 SMEs was identified based on the available data cited in Nyarku and Oduro (2018). The inclusion criteria included that the business should have employees between 5 and 99, be Ghanaian-owned, and be listed at the Registrar General's Department as a registered business. This guided the selection of SMEs in this study. SMEs that do not meet the criteria above were excluded from the study. Using these inclusion criteria, the authors obtained 332 SMEs. Subsequently, 201 SMEs were proportionally selected using the type of SME as the stratification variable. Hence, a final sample of 201 SME owner-managers was included in this study. The use of this sampling procedure offered the study a representative sample without any or limited bias.

### **3.2. Measurement**

#### **3.2.1. Independent variables**

Entrepreneurial orientation and network ties are the independent variables in this study. Five (5) indicators of EO (i.e., innovativeness, risk-taking propensity, proactiveness, autonomy, and competitive aggressiveness) were considered and assessed using a 20-item questionnaire. The network resource ties were measured using two (2) dimensions (i.e., social and business network ties) and an 8-item questionnaire. Measures adopted in this study on EO (Lumpkin & Dess, 1996; Wales et al., 2021) and network resource ties (Lau & Bruton, 2011; Shane & Cable, 2002; Yiu et al., 2007) were adapted and modified from previous studies to achieve the objective of this study. A 7-point Likert scale response with associated scores (strongly disagree = 1 to strongly agree = 7) was used by respondents in rating their EO and network ties, respectively. The reliability of the measures of EO and network ties was estimated using Cronbach's alpha coefficient as follows: EO (N=20 items,  $\alpha=0.777$ ); and network ties (N=8 items,  $\alpha=0.833$ ). Thus, these measures reliably measured EO and network ties.

#### **3.2.2. Dependent variable**

In this study, the dependent variable is firm performance. A two-dimensional, 8-item scale questionnaire was adopted to measure the performance of SMEs (i.e., sales performance and profitability). Measures adopted in this study were adapted from previous studies on profitability (Li & Atuahene-Gima, 2001) and sales performance (Menguc & Auh, 2008) and further modified to suit the objective of this study. Respondents rated their firms' performance using a 7-point Likert scale response comprising very low = 1 to very high = 7. Measures of firm performance adopted in this study were considered reliable (N=8 items,  $\alpha=0.709$ ) (Tables 4 and 5).

### **3.3. Data collection**

After receiving approval for the study from the Humanities and Social Sciences Research Ethics Committee (HUSSREC) of the Kwame Nkrumah University of Science and Technology, Ghana, data collection started using structured questionnaires. The questionnaire was originally compiled in English and translated into Akan, the predominant native language of the majority of owners and managers of SMEs included in this study. This technique was used because of the relatively low level of literacy identified among most of the study participants. Between February and October 2021, the authors personally administered the questionnaires.

The collection of data from study participants used a three-time-separated data collection method with three different questionnaires. Initially (stage 1), the authors collected data on the characteristics of respondents using a questionnaire specifically designed for that purpose. To aid the subsequent collection of data and enhance the accuracy of the collected data, unique identities were created for each

respondent. This identity involved the initials of their first name and the last four digits of their phone number (for example, E8446). The generation of this identity was done in consultation with respondents, which they agreed to. This code was entered on their corresponding questionnaire. In the second phase (stage 2), the authors collected data on the entrepreneurial orientation of each of the SME owner-managers. The final stage (stage 3) comprised data collection on the network ties of SME owner-managers. A timely interval of 3 months was agreed upon between each phase of the data collection, resulting in data collection from the same study participants across three different times. Also, negative items were included to measure the proactive and risk-taking dimensions of EO to address monotonous patterns and enhance the focus of respondents. These methods were used to address the problem of common method bias (MacKenzie & Podsakoff, 2012; Podsakoff et al., 2012). In all, data collection was done over a period of nine months. An average of 10 to 20 minutes was used to complete each questionnaire.

### 3.4. Data analysis

Data collected using the questionnaires were analysed using descriptive and inferential statistical techniques based on the nature of the variable. Prior to the computation of average scores, negative items used to measure EO were reverse coded. Specifically, multiple regression analyses were performed to analyse the association of SMEs' performance with entrepreneurial orientation and network ties. Multiple regression analyses were conducted to determine the relationship between EO, network ties, and the performance of SMEs. Three different regression models were fitted to evaluate the association between SME performance (outcome variable), entrepreneurial orientation, and network ties (key exposure variables), as well as the covariates. In Model 1, the covariates are the industry, the number of employees, and the number of years the business has been open. In Model 2, the main effect of the EO variables (competitive aggressiveness, innovation, risk-taking propensity, proactiveness, and autonomy) and network relations on SME performance is measured. The final model included the interaction term of entrepreneurial orientation and network ties to evaluate the modifying effect of network ties in the association between EO and SMEs' performance. The statistical significance was determined at  $p < 0.05$  using IBM's SPSS, version 20. Various diagnostic tests were performed before the regression analyses. Initially, the Kolmogorov-Smirnov test was used to assess normality for continuous data ( $p > .05$ ). The variance inflator factor (VIF) was used to check for multicollinearity, with the largest estimate of 2.05 indicating no multicollinearity among the variables.

## 4. Results

### 4.1. Descriptive analysis

Table 1 presents a descriptive analysis of the sample's characteristics, including the industry category, the firm's number of permanent employees, years of operation, entrepreneurial orientation, network ties, and performance. The results depict that most of the SME owner-managers are within the service sector (125, 62.2%), while others operate within the manufacturing (65, 32.3%) and education sectors (911, 5.5%). Most of the SME owner-managers had employed between 5 and 29 employees, 193 (96.0%), compared to a few that employed 30 to 99 employees in their businesses, 8 (4.0%). Additionally, the results revealed that, compared to a few of the business owners and managers who had operated for 16 to 30 years (20, 10.0%), most of them had been in operation for a period of 1 to 15 years (181, 90.0%).

Moreover, the results showed that the innovativeness dimension of entrepreneurial orientation is high among the sampled SME owner-managers ( $\bar{x} = 5.22$ ,  $s = 1.99$ ). The results that sampled SME owner-managers were highly proactive in their business endeavours ( $\bar{x} = 5.30$ ,  $s = 1.81$ ). Also, a higher risk orientation was found among sampled SME owner-managers ( $\bar{x} = 5.19$ ,  $s = 1.68$ ). On the contrary, while SME owner-managers moderately encouraged independence or autonomous initiatives in their businesses ( $\bar{x} = 4.39$ ,  $s = 1.83$ ), there was a predominantly low competitive aggression portrayed in their business activities ( $\bar{x} = 3.52$ ,  $s = 2.12$ ).

Furthermore, SME owner-managers possessed strong social network ties ( $x = 5.37$ ,  $s = 1.84$ ), and moderate business network ties ( $x = 4.74$ ,  $s = 2.09$ ). Generally, network resource ties of SME owner-managers

**Table 1.** Characteristics of the sample.

Variable	Mean (SD) or %
Sex: Male	69.2%
Female	30.8%
Education: No formal education	14.4%
Junior high school	11.4%
Senior high education	17.9%
Bachelor's degree	56.2%
Sector: Manufacturing	32.3%
Services	67.7%
Experience: 1 – 15 years	90.0%
16 – 30 years	10.0%
Number of employees: 6 – 30 employees	96.0%
31–100 employees	4.0%
Innovativeness	5.22 (1.99)
Proactiveness	3.30 (1.81)
Risk-taking	5.19 (1.68)
Competitive aggressiveness	3.52 (2.12)
Autonomy	4.39 (1.83)
Social network ties	5.37 (1.84)
Business network ties	4.74 (2.09)
Sales performance	3.62 (2.25)
Profitability	5.27 (1.97)

**Table 2.** Correlation analysis of variables.

	1	2	3	4	5	6	7
Firm performance (1)	1						
Innovativeness (2)	.364**	1					
Proactiveness (3)	.382**	.453**	1				
Risk-taking propensity (4)	.763**	.201**	.161*	1			
Competitive Aggressiveness (5)	.619**	-.213**	-.017	.567**	1		
Autonomy (6)	.343**	.554**	.441**	.119	.098	1	
Network ties (7)	.582**	.564**	.410**	.484**	.204**	.359**	1

\*\* $p < .01$ .

\* $p < .05$ .

in their business endeavours proved to be moderate ( $\bar{x} = 4.99$ ,  $s = 1.31$ ) in this study. Besides, the profitability performance of SMEs was identified as high ( $\bar{x} = 5.27$ ,  $s = 1.97$ ). A low sales performance was also reported among the sampled SMEs ( $\bar{x} = 3.62$ ,  $s = 2.25$ ). In all, the overall performance among SMEs was predominantly moderate ( $\bar{x} = 4.42$ ,  $s = 1.16$ ).

#### 4.2. Correlation analysis

Table 2 shows a zero-order correlation between entrepreneurial orientation, network dimensions, and SME performance. Results indicate that risk-taking propensity ( $r = .763$ ), competitive aggressiveness ( $r = .619$ ), proactiveness ( $r = .382$ ), innovativeness ( $r = .364$ ), and autonomy ( $r = .343$ ) positively and significantly correlated with firm performance at  $p < .01$ . Similarly, the correlation between network resource ties measured in this study (i.e., business, and social network ties) and firm performance was significantly and positively correlated ( $r = .582$ ,  $p < .01$ ).

#### 4.3. Regression analysis

The results of the regression analyses are presented in Table 3. Among the covariates, we observed that the industry category ( $p > .05$ ) and years of operation ( $p > .05$ ) were not significant predictors of firm performance. However, SME performance was positively and significantly associated with the number of employees ( $p < .05$ ) in models 1 and 2, but not 3. The covariates model significantly predicted 13.4% of the changes in the performance of SMEs ( $p < .01$ ).

In addition, the analyses in Table 3 revealed that innovativeness ( $b = .248$ ,  $p < 0.001$ ), proactiveness ( $b = .055$ ,  $p < 0.05$ ), risk-taking orientation ( $b = .348$ ,  $p < 0.001$ ), and competitive aggression ( $b = .343$ ,  $p < 0.001$ ) were significantly and positively associated with SME performance but not autonomy ( $b = .041$ ,  $p > 0.05$ ). Overall, the model additionally accounted for a significant variation in SME performance of 77% ( $R^2$

**Table 3.** Regression analysis on the moderating role of network ties on EO-firm performance relationship.

Variable	Model 1		Model 2		Model 3	
	B	<i>p</i> -value	$\beta$	<i>p</i> -value	$\beta$	<i>p</i> -value
<b>Control variables</b>						
Industry category	.049	.512	-.000	.498	.033	.232
Number of employees	2.166	.000***	.448	.004**	-.022	.903
Years of operation	-.005	.939	.003	.917	.009	.742
<b>Main Effect</b>						
INN	-	-	.248	.000***	.463	.000***
PR	-	-	.055	.003**	.005	.963
RT	-	-	.348	.000***	.062	.673
CA	-	-	.343	.000***	.492	.000***
A	-	-	.041	.101	.400	.002**
NT	-	-	.100	.000***	.548	.003**
<b>Interaction effect</b>						
INN*NT	-	-	-	-	.060	.013**
PR*NT	-	-	-	-	.009	.649
RT*NT	-	-	-	-	.066	.020**
CA*NT	-	-	-	-	.034	.149
A*NT	-	-	-	-	.064	.006**
Constant	2.167	.000***	-1.207	.000***	-2.744	.000***
	$p < .001, R^2 = .134$		$p < .001, R^2 = .899$		$p < .001, R^2 = .913$	

**Dependent variable:** SME performance; INN=Innovativeness; PR=Proactiveness; RT=Risk-Taking; CA=Competitive Advantage; A=Autonomy; NT=Network Ties.

\*\* $p < 0.05$ .

\*\*\* $p < 0.001$ .

=.899). Further analysis revealed significant positive interaction effects between network ties and innovation ( $b = .060, p < 0.05$ ), risk-taking orientation ( $b = .066, p < 0.05$ ), and autonomy ( $b = .064, p < 0.05$ ) in relation to SME performance. On the other hand, no significant interaction effects were found between network ties and proactiveness ( $b = .009, p > 0.05$ ) and competitive aggression ( $b = .034, p > 0.05$ ) in relation to SME performance. The model was a significant improvement in the previous model (model 2), accounting for an additional 1.4% ( $R^2 = .913, p < .001$ ) of the variances in SME performance. Thus, network ties significantly moderate the association of entrepreneurial orientation with SME performance. This suggests that the effect of entrepreneurial orientation on SME performance modifies the association between entrepreneurial orientation and the performance of SMEs.

## 5. Discussion

Using data from a sample of 201 SME owner-managers in a sub-Saharan African context, particularly Ghana, the present study showed three key findings. First, the results of the multivariate linear regression analyses showed that entrepreneurial orientation facets (innovation, proactiveness, risk-taking, and competitive advantage) were independently associated with increases in SME performance. Again, we observed that the network ties of SME owner-managers significantly resulted in improved SME performance. Finally, we discovered that network ties significantly moderated the direct relationship of entrepreneurial orientation with SME performance. Our study sheds light on how entrepreneurial orientation impacts SME performance through direct and indirect (network ties) mechanisms, an underexplored topic with meaningful implications for future informal sector and entrepreneurship research and micro, small, and medium enterprises (MSMEs) policy in sub-Saharan Africa and Ghana, in particular.

One significant contribution of this study is replicating the compelling evidence on the value of entrepreneurial orientation for better SME performance outcomes in a sample from sub-Saharan Ghana. Numerous studies have explored the direct relationship between entrepreneurial orientation and SME performance. Most of these studies have previously reported a significant positive effect of entrepreneurial orientation for SMEs (Bogatyeva et al., 2017; Cuevas-Vargas et al., 2019; Khan et al., 2021; Yang & Aumeboonsuke, 2022). Using a non-experimental, transversal, descriptive, and explanatory quantitative analysis among a predominant-bias microbusiness sample of 355 businesses in Mexico, Cuevas-Vargas et al. (2019) found that entrepreneurial orientation positively influences business performance. Some cross-sectional studies of small businesses in emerging economies have also found that being entrepreneurial makes a big difference in how well the businesses do financially and in other areas as well

(Bogatyreva et al., 2017; Khan et al., 2021; Yang & Aumeboonsuke, 2022). Rezaei and Ortt (2018) observed among 279 high-tech SMEs, however, that EO dimensions related differently to firms' performance functions. While innovativeness and proactiveness were positively related to R&D, marketing, and sales performances, risk-taking was inversely related to production performance.

Several explanations could be offered for the increasing effect of EO on SME performance in this study. The business environment, particularly in sub-Saharan African countries, is turbulent, which makes SMEs more vulnerable to challenges (GOnline, 2023; Li et al., 2021; Zhang et al., 2023). These challenges require owners and managers to be risk-tolerant despite the increased exposure to uncertainties concerning business outcomes. Again, the informal sector, where most of these businesses operate, is characterised by free entry, relatively lower operational costs, and low human resource skills, which makes operating in the sector lucrative and enticing for new market entrants compared to the formal sector. This leads to greater exposure of both existing businesses and new businesses to competition. Due to these, owner-managers who are able to take risks, become proactive about market opportunities, introduce new products and services, and portray competitive aggression compared to their counterparts achieve higher performance outcomes. Thus, being entrepreneurially oriented offers a competitive advantage to SME owners and managers to increase firm performance (Kiyabo & Isaga, 2020). These findings corroborate the arguments of the resource-based view. Entrepreneurial orientation, according to the resource-based theory, is a distinct, important, and strategic dynamic resource and behaviour that helps SME owners and managers redistribute the core competencies of their business. Thus, SMEs' competitive advantage and superior performance result from their firm-specific resources and capabilities (Barney, 2016; Grant, 1991; Jiang et al., 2018).

SME owners and managers in this study benefited significantly from their network ties. This is because, consistent with our hypothesis, network ties improve the performance of SMEs. The implication is that building network ties enhances SME performance. This finding is consistent with several previous studies (Acheampong & Hinson, 2019; Machirori & Fatoki, 2013; Udomkit & Schreier, 2017). The study of Acheampong and Hinson (2019), for example, found that ties act as direct and indirect mechanisms through which resources are diffused for positive SME survival in Ghana. Moreover, network ties moderated the positive effect of entrepreneurial orientation on SMEs' performance. In line with the hypothesis guiding this study, entrepreneurial orientation showed a stronger relationship with the performance outcomes of SMEs among owners-managers who are involved in a denser constellation of social and

**Table 4.** Construct measurement and reliability.

Constructs/Indicators	Measurements	Cronbach Alpha
Entrepreneurial orientation (Jambulingam et al., 2005; Lumpkin & Dess, 1996; Covin & Slevin, 1989)		$\alpha = 0.777$
Innovativeness	My business place strong emphasis on the marketing of tried-and-true products or services My business place strong emphasis on new delivery processes that create value for customers My business has drastically introduced new lines of products that, hitherto, were not on the market My business is known for being innovative	
Proactiveness	I typically initiate actions, which competitors then respond to My business is usually the first to introduce new products and services, administrative techniques, operating technologies, etc. My business typically seeks to avoid competitive clashes, preferring a "live-and-let's-live" posture** Overall, my business is proactive.	
Risk Taking	I have a strong proclivity for high-risk business projects with chances of very high returns Due to the nature of the business environment, I believe it is best to explore it gradually through timid, incremental behaviours** I typically adopt a cautious, "wait-and-see" posture to minimise the probability of making costly decisions** Overall, business decisions are characterised by high risk	
Competitive aggressiveness	In doing business, we typically adopt an "undo-the-competitor" posture in our target markets We take hostile steps to achieve competitive goals in our target markets We face our competitors "head-on" in all areas of strategy Overall, our actions towards competitors can be termed aggressive	
Autonomy	We encourage employees to behave autonomously in our business operations We encourage employees to act independently to carry out business ideas through to completion We encourage employees to be self-directed in pursuit of target market opportunities Overall, our firm promotes independent and autonomous initiatives. Network tie dimensions	

**Nb.** 1 = Strongly disagree; 2 = Disagree; 3 = Somewhat disagree; 4 = Neither agree nor disagree; 5 = Somewhat agree; 6 = Agree; 7 = Strongly agree.  
\*\*Indicates reverse coded reverse coded indicators.

**Table 5.** Construct measurement and reliability.

Network tie dimensions (Lau & Bruton, 2011; Shane & Cable, 2002; Yiu et al., 2007)		$\alpha = 0.833$
10. Social network ties	I can obtain information about my industry from my network of contacts faster than competitors can obtain the same information I have a professional relationship with someone influential in my industry I have engaged with someone influential in my industry in informal social activities Overall, I have a strong social network	
11. Business network ties	I have a good relationship with key clients  We have a cordial relationship with suppliers We undertake joint projects with competitors Overall, our business network ties are strong and positive	
Business performance (Cadogan et al., 2002; Li & Atuahene-Gima, 2001; Menguc & Auh, 2008)		$\alpha = 0.709$
12. Profitability	Evaluation of the business's overall profitability Evaluation of the business's return on investment Evaluation of the business's return on assets Overall profitability of the business	
13. Sales Performance	Evaluation of overall market share relative to the target market objective Evaluation of sales volumes relative to the target market objective Evaluation of sales growth relative to the target market objective Overall sales performance of the firm	

1=Strongly disagree; 2= Disagree, 3=Somewhat disagree; 4=Neither agree nor disagree; 5=Somewhat agree; 6=Agree; 7=Strongly agree.

business networks. This finding means that network ties developed by owners-managers encourage some positive performance outcomes for SMEs. This finding is consistent with previous studies that established that micro and small businesses' networking behaviours could enhance business performance (Chell & Baines, 2010; Ebbers, 2014; Huggins & Thompson, 2017; Khan et al., 2019). Several plausible mechanistic pathways could explain this finding.

First, the study was conducted in a setting characterised by heavy ethnic affiliations and networks, where those of the same ethnic groups involved in similar businesses form associations to help each other succeed in their activities. Business and professional network ties help constituent members have access to social capital that facilitates potential innovations and advice on resources through information flow. Which are aligned with desired actions, especially instances where those they are in contact with have new and different ideas. This affirms the evidence that in recent years, small businesses have portrayed good innovation through the networks they develop (Agyapong et al., 2017; Rosenbusch et al., 2011). Secondly, commercial and business capabilities, including access to contacts, market information, communication skills, and quality management skills (Hernández-Carrión et al., 2020; Hernández-Carrión et al., 2017; Pesämaa et al., 2015) are embedded in these networks. In Ghana, for instance, social interaction ties and business networks of SMEs were established to have a significant increasing effect on the acquisition of foreign business and institutional knowledge that in turn increases export performance (Abubakari et al., 2021; Boateng et al., 2021). Additionally, SME owners and managers have greater chances of accessing debt financing options, gaining a better reputation, reducing transaction costs, and creating new market opportunities (Lin & Lin, 2016; Machirori & Fatoki, 2013). Therefore, the network, through these benefits, helps SMEs effectively deploy their entrepreneurial orientation strategies to enhance their performance, as shown in this study. These findings support the resource-based view and the network theory that entrepreneurial orientation and network ties are central resources that could be used by SME owner-managers to achieve their entrepreneurial goals and superior performance (Harms, 2013; Udimal et al., 2021).

Regardless of the significant role of entrepreneurial orientation and network ties in improving the performance of SMEs, policy initiatives and programmes that address the performance challenges of SMEs in Ghana often fail to address their entrepreneurial orientation and networking needs. Most of these initiatives focus on improving access to finance, financial literacy, and addressing infrastructural deficits. Our findings consequently call for concerted, rigorous commitments at both national, association-based, and individual levels to improve entrepreneurial orientation and networking capabilities among SME owners and managers. The study has implications for and provides performance inducement pathways for the Micro, Small, and Medium Enterprises (MSME) Policy.

This study has some limitations. First, the study relied on cross-sectional data, which means that the directionality, causality, and temporality of the relationships found in this study could not be determined.

Literature could benefit from future studies that report findings from longitudinal and bidirectional analyses that highlight causal and temporal connections between entrepreneurial orientation, network ties, and SME performance, particularly in sub-Saharan Africa. Also, the sample represented SMEs in urban settings, and SMEs registered with the Registrar General's Department were Ghanaian owned. This may, however, not be an adequate representation of the general population of SME owners and managers in Ghana due to possible differences in structure and management. Other SMEs owned by non-Ghanaians were also not considered in the current study, although owners and managers of such businesses might have different business cultures and experiences from those considered in this study that could impact their entrepreneurial orientation (Engelen et al., 2014; Kreiser et al., 2010; Rostain, 2021) and network ties (Fuhse & Gondal, 2022; Njoku & Cooney, 2020). Also, possible factors that could influence the entrepreneurial orientation and type of network ties formed by SME owner-managers were not considered in this study. Future studies may wish to consider these limitations, compare samples from rural and urban settings, and examine the role of additional demographics and background variables. Moreover, knowledge of the underlying mechanisms of the associations between the variables could be improved further through qualitative studies that explore in depth the precise nature of these associations. Furthermore, future studies could test how ethical leadership, specifically one that embraces a corporate social orientation, could affect entrepreneurial orientation, and promote collaboration with other stakeholders to ultimately enhance business performance. Therefore, future research could study the role of ethical leadership in fostering ethical behaviours among employees. Furthermore, future studies could test how ethical leadership, specifically one that embraces a corporate social orientation, could affect entrepreneurial orientation, and promote collaboration with other stakeholders to ultimately enhance business performance. Therefore, future research could study the role of ethical leadership in fostering ethical behaviours among employees (Ruiz et al., 2011), as well as cooperative and entrepreneurial behaviours (González-Moreno et al., 2019).

## 6. Conclusions

The analysis significantly contributes to the scholarly literature on the associations of entrepreneurial orientation, network ties, and their interrelationships with SME performance, particularly in a sub-Saharan African context. Entrepreneurial orientation and network ties emerged from this study as major factors shaping the performance of SMEs within the Ghanaian context. With the beneficial effect of entrepreneurial orientation strengthened by the network ties of owners-managers, this accentuates the need for policy interventions and programmes to encourage a behaviour-based approach to addressing the performance challenges faced by SMEs. Therefore, advancing and strengthening entrepreneurial orientation and network connections among SMEs through integrated interventions by the government, the National Entrepreneurship and Innovation Programme (NEIP), the Ministry of Business Development, and other relevant non-governmental organizations We, therefore, conclude that entrepreneurial orientation and network ties are important managerial resource capabilities needed for business performance and survival in the Ghanaian informal sector, which is characterised by instability and risks.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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## Data availability statement

The data that support the findings of this study are reported in this manuscript.

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