

Correlation between business innovation environment (BIE) and entrepreneurial orientation dimension (EOD) on financial performance of manufacturing SMEs in Ghana

Manufacturing
SMEs in Ghana

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Abstract

Purpose – The purpose of this study was to provide comprehensive overview, and exposure of the correlation between entrepreneurial orientation dimension (EOD) and business innovation environment (BIE) on small and medium enterprises (SMEs) financial performance in the Ghanaian manufacturing SMEs sector that enhances knowledge and contextualization in marketing and entrepreneurship literature.

Design/methodology/approach – Anchored on resource-based view theory, 520 manufacturing SMEs companies were conveniently drawn from Association of Ghana Industry, through National Board for Small Scale Industries, using structural equation modelling techniques to analyse the hypotheses.

Findings – This study revealed that three entrepreneurial orientation dimensions EOD: risk-taking, innovations and pro-activeness have positive significant impact on financial performance manufacturing of SMEs. BIE also has positive impact on financial performance of manufacturing of SMEs and BIE moderates SMEs financial performance.

Research limitations/implications – This is a country-specific manufacturing SMEs sector, which means that the findings cannot be used to justify other SMEs in Ghana and SMEs in different country. However, the study was limited to only three EODs: risk-taking, innovations, pro-activeness and Ghanaian manufacturing BIE of SMEs. More countries and other SMEs are needed to expand the field of research in EODs and BIE.

Practical implications – It provides an insight into BIE which is important for marketers, entrepreneurs, regulatory bodies, SMEs owners-managers, directors, government and NGO to strengthening and reshaping their BIE in manufacturing SMEs sector policies, conducts and laws.

Originality/value – This paper fills knowledge and contextual gap in entrepreneurship and marketing literature by presenting comprehensive overview of BIE and EOD research that enhances the on-going discussion in the marketing and entrepreneurship manufacturing SMEs context and proposing priorities for future research streams within an emerging economy.

Keywords Entrepreneurial orientation dimension (EOD), Manufacturing, Business innovation environment (BIE), Financial performance of SMEs

Paper type Research paper

Introduction

The entrepreneurial orientation dimension (EOD) reflects an organizational position regarding the progressions, practices and activities that increase value when engaging in business activities in business innovative environment (BIE) (Abass *et al.*, 2020; Lumpkin and Dess, 1996). EOD consists of innovativeness, pro-activeness, risk-taking, autonomy and competitive



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aggressiveness (Lumpkin and Dess, 1996; Miller, 1983). Apparently, the urgency of small and medium enterprises (SMEs) plays an important role in socio-economic development in financial performance by providing job opportunities, government revenue, total economic savings and gross domestic product (GDP) in BIE (Abass *et al.*, 2020; Kongolo, 2010).

Furthermore, the necessity of SMEs in BIE from late 1970s and early 1980s, has a favourable impact on regional economic development and serve as a training ground for policymakers, marketers, entrepreneurs, industrial owners-managers, directors and workers to enhance their skills, experience and expertise, according to National Board for Small Scale Industries (NBSSI, 2020). Characteristically SMEs play an essential complementary role in financial performance by driving the economic growth in developing, emerging and developing country such as market expansion, poverty reduction and new methods of production through BIE innovatively (Beck and Demircuc-Kunt, 2006; Dzogbenuku and Keelson, 2019).

Over the past few decades, SMEs have accounted for the majority of financial performance of businesses across the globe (Awan and Kraslawski, 2019). Some research studies focussed to identify and specify the relationship between EOD and financial performance (Abass *et al.*, 2020). Essentially, the SMEs sector plays an important function in influencing most countries financial performance system in phrases of the financial process, employment rate, additionally the stability of payments (Ahmed *et al.*, 2017; Fatemah and Qayyum, 2018).

According to the National Board for Small Scale Industries (NBSSI, 2020; Boohene *et al.*, 2015; Kayanula and Quartey, 2000), SMEs are defined in Ghana as small-scale firms with plant and machinery (excluding land, buildings and vehicles) not exceeding 10m Ghanaian cedi and number of employees not more than nine. Also indicated by the Ghana statistical service (Ghana Statistical Services GSS, 2020; Issahaku *et al.*, 2017; Kayanula and Quartey, 2000), firms with less than 10 employees are considered as small-scale enterprises and their counterparts with more than 10 employees as medium- and large-sized enterprises not more 250. Although, some studies have been conducted on entrepreneurship, marketing and SMEs financial performance within context (Abass *et al.*, 2020; Beck and Demircuc-Kunt, 2006; Washington *et al.*, 2016), none of these earlier studies have examined the structural correlation between BIE and EOD which create extant knowledge and contextual gap in marketing, management and entrepreneurship literature.

The purpose of this study is to investigate the impact of EOD on BIE SMEs financial performance within the Ghanaian context. This study aimed presenting comprehensive overview of EOD SMEs financial performance research on BIE that enhances knowledge in marketing and entrepreneurship literature. Findings from this study will urgently and significantly contributes to implementations and sustainability of EOD and BIE in the manufacturing SMEs sector implemented by owner-managers, marketers and directors, regulatory bodies to fine-tune their marketing and entrepreneurship strategies effectively and efficiently. Hence, the study develops the following objectives: to investigate the influence of EOD on BIE in SMEs financial performance as well as establish the relationships amongst EOD and BIE in context. The study is constructed as follows: Section 2 presents existing literature review on theories (resource-based view (RBV)), BIE and entrepreneurial orientation. In Section 3, the methodology is presented. Section 4 provides the data analysis, Section 5 provides the discussion of results. Finally, Section 6 provides conclusion, implications and future research directions.

The resource-based view theory

According to the RBV theory, SMEs have the capabilities through EOD to achieve their financial performance by carefully utilizing the available resources in BIE (Abass *et al.*, 2020; Barney, 1991; Dwivedi *et al.*, 2009). Dwivedi *et al.* (2009) highlighted the importance of the RBV theory, as it magnifies the resources that SMEs possess in BIE, including both tangible and intangible resources. However, the RBV theory assumes that SMEs in BIE fully utilize their resources through EOD (Abass *et al.*, 2020; Dwivedi *et al.*, 2009; Rivard *et al.*, 2006).

Hence, past studies that employed the RBV theory to support the entrepreneur orientations contribution focussed on the impact of entrepreneur orientations over the performance of SMEs in BIE. Studies have proved the usefulness of RBV theory. For instance, Mário Caldeira and Ward (2003) used the RBV theory to interpret successful entrepreneurial plans of SMEs. Also the RBV theory was criticized (Ahmad *et al.*, 2017; Jourdan, 2002; Ahmed *et al.*, 2017) criticized the RBV theory by stating that the theory does not focus on process and end goals, but only on outcome goals. Jourdan (2002), the theory is not based on behavioural theories to determine how dimensions can be integrated to create a unified brand.

Despite this criticism, scholars (Rahman *et al.*, 2019; Shafei, 2017; Shafei, 2013) have authenticated the theory with argument that the theory is more contextual and critical rare. The theory (RBV) is based on organizational performance (Chaston, 2016; Morris *et al.*, 2002; Schendel and Hofer, 1979). The RBV theory upholds that organizations act rationally to evaluate the performance of their activities and move forward based on the performance measurement (Murphy *et al.*, 1996). The theory confirms firm performance variables such as growth, efficiency, profit, reputation and owners' personal goals (Murphy *et al.*, 1996; Venkatraman *et al.*, 1986). Some scholars indicated that there is no agreement in the theory between dimensions underlying EOD behaviours (Hills and Hultman, 2013; Hills and Hultman, 2011; Kilenthong *et al.*, 2015; Whalen *et al.*, 2016). Scholars indicated that the theory enable innovative character of entrepreneurs to utilize EOD in new ways to bring their products and services to market despite having less resources than larger corporations (Morris *et al.*, 2002; Stokes, 2000).

Undeniably, Evans (2005), Murphy and Callaway (2004), Panigyrakis and Theodoridis (2007) argued that the theory is applicable in studying measurement of the performance of EOD in both financial and non-financial growth, efficiency, profit, reputation and owners' personal goals as a measures of overall SME performance. Scholars indicated that the RBV theory can be applied to all types of companies regardless of their size (Hisrich and Ramadani, 2018; Kraus *et al.*, 2009; Whalen *et al.*, 2016). To address the challenges of knowledge and contextual gap by understanding the application and practice of the theory in the marketing management and entrepreneurship field, EOD were conceptualized as BIE within the Ghanaian manufacturing SMEs financial performance situation. This study explores three entrepreneur dimensions such as risk-taking, innovativeness, pro-activeness as the building blocks of BIE from the Ghanaian manufacturing view.

This research purpose is to create a favourable relationship between EOD and BIE that lead to entrepreneurs and marketer's value and quality customers in the manufacturing SMEs context. This study presents the theory within context, by measuring company's efficient and effective resource allocations and utilisations of scarce resources in EOD and BIE. This study presents the theory within context, by measuring innovativeness in EOD and BIE. This study presents the theory within context, by measuring defensive strategies and offensive strategies in the SMEs context. This study presents the theory within context, by measuring BIE customer service and quality satisfaction after they encountered products and services.

Literature review

Manufacturing

SMEs in the manufacturing sectors have won developing interest amongst academicians and practitioners (Abbas *et al.*, 2020). Despite the importance contribution of the manufacturing SMEs sector in riding the financial performance improvement of Ghana economy immensely such employment, revenue generations tools for the government, SMEs in manufacturing sector have remained low for the earlier few years due to financial challenges (GSS, 2020).

Indeed the manufacturing sector grew by an impressive 9.5% in 2017, up from 7.9% in 2016 and 3.7% in 2015, which has significant effects on the overall performance of its manufacturing sectors, such as food and beverages, drinks, etc. (GSS, 2020). However,

according to the Ghana Statistical Service (GSS, 2020), the economic survey of Ghana revealed manufacturing sector contributed GHS28bn (\$6.1bn) to GDP in 2017, up from GHS23, 9bn (\$5.2bn) in 2016 and GHS20, 5bn (\$4.4bn) in 2015. Additionally GDP from the manufacturing sector in Ghana increased to 5112.15 GHS million in the first quarter of 2020 from 4548.69 GHS million in the fourth quarter of 2019 (GSS, 2020).

In the report on the manufacturing sector in Ghana, according to Ghana Statistical Service (GSS, 2020) highlighted its economic contribution to the country, the manufacturing sector contributed over 40% of the industrial labour force and GDP of 11.3% of GDP in 2018 (GSS, 2020). The above figures reflect the significance and viable role of the manufacturing sectors across the world in expanding the country's economic spectrum (Jazib Ahmed, 2016).

Entrepreneurial marketing orientation and manufacturing

Miller and Friesen (1983) introduced EOD which include companies' activities to be innovative, proactive, risk-taking, autonomy and competitive aggressiveness (Covin and Slevin, 1989; Miller, 1983). EOD is essential for the survival of SMEs financial performance through BIE (Abbas *et al.*, 2020). Two-thirds of the newly established EOD in SMEs were revealed to survive up to two years, while 44% of EOD in SMEs were found to survive up to four years, and only about 4% of them overgrew (Abass *et al.*, 2020; Storey, 2016). The significant failure rates amongst EOD SMEs financial performance in BIE were attributed to many reasons: lack of entrepreneurial practices, mismanagement, limited understanding of environmental conditions of risk, marketing problems and planning (Abass *et al.*, 2020; Durst and Aggestam, 2016; Paul *et al.*, 2017). With the increase of new EOD in SMEs, nurturing these EOD in SMEs into long-term businesses requires a broader set of skills, expertise and resources in BIE (Tetteh and Burn, 2001). EOD through SMEs financial performance serves as one of the key elements that drive the economic development and growth for most countries through BIE (Abbas *et al.*, 2020; Hodi *et al.*, 2010). SMEs in the manufacturing sector stimulate economic activities in pursuit of their vision of EOD in SMEs through BIE. SMEs find unique opportunities that drive their pursuit towards realizing their vision of EOD in SMEs through BIE. Owners of SMEs by practicing EOD in SMEs, should focus on starting new businesses with their EOD activities involves pro-active, risk-taking and innovative decisions (Leitch and Volery, 2017). Today, SMEs in BIE are a vital source of EOD in terms of employment, social and stability as well as innovation and competition (Ferreira and Thurik, 2015).

Entrepreneurial marketing orientation and business innovation environment

EOD and its impact on the overall performance of SMEs in BIE have obtained huge interest when it comes to the context of manufacturing (Chen *et al.*, 2016). Due to the changes in the BIE, given the dynamic nature of innovation in manufacturing market, the significant influence of EOD on financial performance and BIE of SMEs has become increasingly important (Thanos *et al.*, 2017). EOD exhibits the capacity to reform the production process and promotes the adoption of BIE-innovative practices and the establishment of new outlets for products and services (Zehir *et al.*, 2015).

Nevertheless, the success of the EOD in BIE implementation relies upon on the attitude, commitment, experience, skills and understanding of the proprietors, owners-managers of SMEs in BIE (Wiklund and Shepherd, 2003a, b). Past studies proved the significance of EOD with financial performance of firm (Abass *et al.*, 2020; Hernandez-Perlines, 2018; Sok *et al.*, 2017; Thanos *et al.*, 2017). According to Abebe (2014), Wang *et al.* (2017), SMEs in BIE were also proposed for further investigation given the lack of EOD practices. EOD is a multidimensional composite construct: pro-active, risk-taking, innovation, autonomy and competitive aggressiveness practices that represents the capability of SMEs in BIE (Chow, 2006; Covin and Slevin, 1989; Hughes and Morgan, 2007). Most studies have identified EOD

as an essential factor that influences the SMEs performance in BIE (Amin *et al.*, 2016; Mohammad and Mahmood, 2016).

On the contrary, some past research studies examine the insignificant relation amongst EOD and SMEs performance (Alegre and Chiva, 2013; Lechner and Gudmundsson, 2014). The inconclusive findings on the influence of EOD on the SMEs performance as well as the proposed recommendations from past studies to further explore the significance of EOD demonstrated the imperative need to assess EOD as an important construct in SMEs performance. Similarly, (Sheikh *et al.*, 2017) also highlighted the importance of BIE in evaluating the SMEs performance. Studies have discussed the positive relationship between financial performance and the SMEs (Abass *et al.*, 2020; Islam *et al.*, 2011; Otache and Mahmood, 2015). BIE seems to be a practicable correlation variable that can have an effect on the relationship between EOD and the overall SMEs performance (Abass *et al.*, 2020; Andy *et al.*, 2019; Fairoz *et al.*, 2010).

Business innovation environment and SMEs financial performance

SMEs are a principal importance for survive and perform in BIE (Abbas *et al.*, 2020; Polat and Mutlu, 2012). Studies have identified risk-taking, pro-activeness and innovativeness as key dimensions of EOD in relation to the SMEs financial performance (Abass *et al.*, 2020; Sadiku-Dushi *et al.*, 2019). Similarly, EOD can be viewed as a specific route by which SMEs financial performance in BIE can identify with circumstances and exercises that prompt more business opportunities (Abass *et al.* 2020; Hulberta *et al.*, 2013). Additionally, EOD is one of the critical assets that affect the SMEs financial performance in BIE. EOD has processes, activities and aims of the entrepreneurs to create prospects and promote their productions in their BIE. These procedures, operations and plans include some risky behaviours, like aptitude to be proactive and to introduce new innovations to compete with competitors in BIE (Calabrò *et al.*, 2018). Additionally, EOD is the capacity of SMEs in BIE to perform more practical in their actions, decisions and to innovate (Abass *et al.*, 2020; Raby and Gregson, 2018). Lechner and Gudmundsson (2014), EOD as the procedure, behaviour and edifice for the firms through their BIE SMEs financial performance.

Meanwhile, Wiklund and Shepherd (2005) described EOD as the strategic capability of SMEs to seize opportunity, unique components of decision-making, methods and enterprise practices of SMEs in the studies of (Gupta *et al.*, 2013). SMEs in BIE with sound EOD is in a position to become aware of new market opportunities from their SMEs financial performance (Masa'deh *et al.*, 2018). BIE is regarded as the external environment of manufacturing SMEs financial performance that include their operating environments, such as the government, competitors, customers, suppliers and sociocultural aspects (Abass *et al.*, 2020; Gupta *et al.*, 2013).

H1. Entrepreneur orientation dimension has significant impact on financial performance of SMEs.

BIE refers to SMEs external and internal environmental factors that affect business activities based on changes in operation settings in the political, economic, sociocultural, technological and environmental or ecological aspects, legal environments (Abass *et al.*, 2020; Sloman, 2007). The external environmental factors consist of all physical and non-physical uncontrollable factors beyond the operation of SMEs financial performance in BIE, such as customers, suppliers, competitors, and socio-political and technological factors that affect individual behaviour and the decision-making of SMEs (Abbas *et al.*, 2020). Manufacturing SMEs in BIE physical factors refer to all tangible elements while non-physical factors refer to all intangible factors, such as social factors (Abbas *et al.*, 2020). Whilst manufacturing SMEs in BIE internal environmental factors are the all physical and non-physical activities controllable by operations (Abbas *et al.*, 2020).

As (Lumpkin and Dess, 1996; Miller, 1983) identified five EODs: innovativeness, pro-activeness, risk-taking, autonomy and competitive aggressiveness. This research examines three dimensions of EOD out of the five dimensions that are defined below: risk-taking, innovativeness, pro-activeness.

Risk-taking is the tendency of a firm to borrow heavily, liquidating assets to finance expansion opportunities, commit substantial amount of resources to projects whose returns are not known and uncertain, and make entry into new unexplored markets (Avlonitis and Salavou, 2007; Walter *et al.*, 2006; Okoyo *et al.*, 2016). Dess and Lumpkin (2005) identified three main types of risks faced by SMEs: business risk, financial risk and personal risk. Firms taking such financial risks may experience rewards in form of substantial returns or significant losses. Researchers (Okoyo *et al.*, 2016) argue that there is no significant relationship between risk-taking and SMEs financial performance. (Kallmuenzer and Peters, 2017) found positive relationship between risk-taking and SMEs financial performance.

Innovativeness was first recognized by Schumpeter (1942). Innovativeness is the fundamental instrument of firm strategies to generate new ideas for new products, enhance existing processes and services to penetrate markets, expand market share and give a firm competitive advantage in response (Okoyo *et al.*, 2016; Rauch *et al.*, 2009a, b). Innovativeness is also related to creativity which is a source of ideas that can lead to innovation of products, services, processes and technology (Okoyo *et al.*, 2016; Landstrom, 2005). Abaas *et al.* (2020) found that EOD has positive and significant effects on financial performance of SMEs.

H2. Entrepreneurial orientation dimension (innovativeness) in BIE has a significant impact on SMEs financial performance.

Pro-activeness. The tendency of SMEs to be forward-looking and to become and enjoy a first-mover advantage in a market indicates firm's pro-activeness. It also the process of anticipating and pursuing new opportunities related to future demand, supply and by participating in emerging markets (Okoyo *et al.*, 2016). Kusumawardhani *et al.* (2009) have argue that proactive firms introduce new products in the market ahead of their competitors, Hughes and Morgan (2007) thereafter argue that firm's pro-activeness is determined by awareness and responsiveness to market signals. Kropp *et al.* (2008) argue that firms that identify and evaluate new opportunities and monitor trends in markets are regarded as proactive.

H3. Entrepreneurial orientation dimension (proactiveness) in business innovation environment has significant impact on SMEs financial performance.

Instrumentation and data analysis. To measure the correlation between BIE and EOD, this research adapted existing item scales from previous studies (see Table 1).

Methodology

Population, sample and data collection

According to Sekaran and Bougie (2009), population refers to the entire group of people, measures and things of interest that the study attempts to explore. The owners-managers of over 30,000 manufacturing companies registered under Association of Ghana Industries (AGIs) (AGI, 2020) established 1958 to oversee the conduct and operations of manufacturing and industries in Ghana's represented the target population of this study. The list of 15,000 SMEs companies was accessed from AGIs through the NBSSI established (Act 434 of 1981) as a regulator of SMEs in Ghana and 520 was chosen. A sample is said to represent the target population, manufacturing SMEs represent my sample and a probability sampling method is used to narrowly the population, probability sampling is essential where all elements of the population have an equal and independent chance to be selected as respondents (Abbas *et al.*, 2020; Rubin and Babbie, 2007; Sekaran and Bougie, 2009).

Items	References	Reliability	Factor loadings
<i>Financial performance of SMEs</i>			
FIN1: Return on assets (profit/total assets)	Gunday <i>et al.</i> (2011)	0.81	0.85
FIN2: General profitability of the firm		0.81	0.82
FIN3: Return on sales (profit/total sales)		0.81	0.78
FIN4: Cash flow excluding investment		0.82	0.77
FIN5: Cash flow including investment		0.86	0.75
FIN6: General sales margin		0.82	0.74
<i>Proactiveness</i>			
PROA1: I frequently measure my company customer satisfaction	Shafaei (2017)	0.91	0.77
PROA2: Employees recognized the importance of satisfying our customers	Covin and Slevin (1989)	0.91	0.76
PROA3: My business objectives are driven by customer satisfaction		0.92	0.75
PROA4: I pay closed attentions to after sales services delivery		0.91	0.68
PROA5: Employees strive for innovativeness and customer relationship		0.91	0.64
PROA6: I monitor my company commitment in serving customer needs		0.91	0.61
<i>Calculated risk-taking</i>			
RISK1: We will rather accept a risk to pursue an opportunities than miss	Becherer <i>et al.</i> (2012)	0.84	0.86
RISK2: Company willing to take risk when we think it will benefit us		0.83	0.78
RISK3: We will be seen as gamblers, but we take risk of customer centric		0.83	0.75
RISK4: I always looking for better ways to do things in my company		0.82	0.69
RISK5: I excel at identifying opportunities for my company	Gunday <i>et al.</i> (2011)	0.83	0.67
RISK6: My company take the risk in innovative programme		0.84	0.60
<i>Innovativeness</i>			
INNO1: My company use innovative approach to get job done efficiently	Becherer <i>et al.</i> (2012)	0.78	0.81
INNO2: Being innovative is a competitive advantage for my company		0.77	0.81
INNO3: My company is more innovative than most of our competitors	Prajppo (2016)	0.79	0.81
INNO4: My company encourages creativities, innovation		0.75	0.58
INNO5: I constantly lookout for new ways to improve my company	Lumpkin and Dess (2011)	0.76	0.64
INNO6: My company encourage creativeness for staff members		0.75	0.67
<i>Business innovation environment</i>			
BIE1: My company encourage innovative packaging		0.78	0.78

(continued)

Table 1.

Table 1.

Items	References	Reliability	Factor loadings
BIE2: I excel at identifying opportunities for my company		0.76	0.76
BIE3: In my company, I am more action-oriented than reaction-oriented		0.76	0.77
BIE4: My business provide excellent working environment		0.75	0.75
BIE5: Willingness to spend more money in business environment		0.76	0.73

In order to obtain more information on a specific sample, simple random sampling is typically considered as one of the most efficient sampling strategies, particularly when the researcher has the list of the entire population. Following the initial data screening, a sample is typically selected for data collection. Simple random sampling is the best option when the researcher knows the number and name of respondents or population under study (Babbie, 2011; Saunders, 2011; Sekaran and Bougie, 2009).

Referring to the Morgan's table (Krejcie and Morgan, 1970), the required sample size from a population of over 30,000 registered manufacturing companies under AGIs (AGI, 2020), 5,430 was SMEs and 1,500 was manufacturing companies. Shehu and Mahmood (2014) further suggested that the sample size should be increased to reduce error and compensate for the non-response issue. Hence, the required sample size for this study was increased from 130 respondents by approximately 50%, resulting in the distribution of questionnaire amongst 520 randomly selected manufacturing SMEs.

This study obtained data from the owners-managers and directors of SMEs in the Ghana's manufacturing sector by the use of questionnaires. In this study, the questionnaire sets were personally administered in March 2020 despite the global pandemic by using personal protective equipment. Because personal visits to the respondents are said to increase the response rate (Sekaran, 2010). The study distributed 520 questionnaire sets and successfully obtained 462 questionnaire sets, resulting in a response rate of 89.5%; 58 were not collected. Thirty wrongly filled responses were found. Hence, 30 questionnaire sets were excluded from the ensuing analysis, resulting in a valid response rate of 82.9% with 432 questioners. The data from all 432 questionnaire sets were used for the subsequent analysis using SPSS structural equation modelling techniques. The recorded response rate was deemed comparable to other past studies (Abbas *et al.*, 2020; Chan *et al.*, 2017; Mohammed and Obeleagu-Nzelibe, 2014). Table 2 presents all demographics of the respondents of the study.

Measures

The study adopted measures from previous research studies. Total number of questions asked were 30, five questions for demographics, eleven for EOD (Covin and Slevin, 1989), five for financial performance (Harif *et al.*, 2012) and nine for innovations in BIE as a correlator (Prajogo, 2016) (see Tables 3–6).

Reliability and validity tests

For this study, the pre-test involved three experts from the University of Professional Studies, Accra, Ghana Technology University College and University of Ghana in Ghana. These appointed experts were required to provide their expert opinions on the appropriateness and representativeness of the developed instrument (Sekaran and Bougie, 2009). They were also requested to examine any redundant, over-represented or under-represented items. Apart

Demographic information	Frequency	Percentage (%)	Manufacturing SMEs in Ghana
<i>Gender</i>			
Male	320	70.8	
Female	112	29.3	
Total	432	100	
<i>Number of employees</i>			
1–49	158	38.7	
50–99	178	45.9	
100–149	18	3.5	
150–199	78	11.9	
Total	432	100	
<i>Types of firm</i>			
Manufacturing	98	24.6	
Service	108	27.5	
R&D	30	4.1	
Wholesaler	136	33.5	
Retailer	60	10.3	
Total	432	100	
<i>Time in firm</i>			
Less than 5	10	2.4	
5–10	70	17.2	
10–15	346	80.4	
Total	432	100	
<i>Job position</i>			
Owner	368	84.9	
Manager	64	15.1	
Total	432	100	

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Table 2.
Demographics profile
of the respondents

Descriptive	No.of item	References	
<i>Section 1</i>	5		
Demographic information of respondents			
<i>Section 2</i>	5		
Financial performance of SMEs		Harif <i>et al.</i> (2012)	
<i>Section 3</i>	11		
Entrepreneurial marketing orientation			
<i>Section 4</i>	9	Becherer <i>et al.</i> (2012) Prajogo (2016)	
Business innovation environment			
Total	30		

Table 3.
Descriptive of
instrument

from that, opinions from the practitioners in the manufacturing sector on the questioners were acquired.

A pilot test was also conducted from the concerned respondents of the SMEs manufacturing sector from where the researcher have collected data. The pilot test was conducted to calculate certain tests, the reliability, content validity, readability, wordings, formatting, sequencing and readability of the questions. It was also used to determine the time required for the respondents to complete the questionnaire survey in order to set up the correctness and suitability of the research design and arrangement. The opinions and remarks from the professionals had been received to discover the appropriateness of the language and shape of the adopted instrument.

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Table 4.
Reliability analysis of
items and constructs

Items	BIE	Alpha	CR	AVE
BIE1	0.78			
BIE2	0.76			
BIE4	0.77			
BIE5	0.75			
BIE6	0.73			
BIE7	0.78			
BIE8	0.76			
BIE9	0.77	0.897	0.945	0.62
EODINNO1	0.78			
EODINNO2	0.77			
EODINNO3	0.79			
EODINNO4	0.75			
EODINNO5	0.76			
EODPROA1	0.77			
EODPROA2	0.76			
EODPROA3	0.75			
EODRISK1	0.86			
EODRISK2	0.78			
EODRISK3	0.75	0.879	0.908	0.50
SMEFP1	0.85			
SMEFP2	0.82			
SMEFP3	0.78			
SMEFP4	0.77			
SMEFP5	0.75	0.892	0.920	0.53

Table 5.
Result of descriptive
analysis

Variables	N	Mean	Std. deviation	Skewness	Kurtosis
FP	432	3.6520	0.74278	−0.316	−0.381
EOD	432	3.4203	0.63807	0.230	−0.321
BIE	432	3.7456	0.62164	−0.313	−0.122

Table 6.
Hypothesis testing

	Hypothesis	Original sample	T-statistics	p-values	Status
H1	EOD-FP	0.304	6.317	0.000	Significant
H2	EOD-BE-FP	0.071	1.973	0.049	Significant
H3	BIE-EOD-FP	0.065	5.489	0.005	Significant

The testing of the theoretical constructs, reliability of an instrument is essential aspects that determine the reliability of the measurement and the reproducibility of the obtained results. Cronbach's alpha as a reliability which reflects the internal consistency of the measures (Saraph et al., 1989), was applied in the present study for each measure. Cronbach's alpha coefficient is a standard method to estimate the internal consistency of items. The obtained data were analysed using SPSS. In particular, the reliability of each construct was separately tested.

Descriptive analysis

According to D'Agostino (2017), values of skewness and kurtosis should be less than ± 2.0 ; skewness of more than 3 and kurtosis of more than 10 indicate potential problem and values

of more than 20 may lead to more critical issues during the analysis (Kline, 2015). Hence, based on this recommendation, both skewness and kurtosis of less than 2 were considered for the obtained data in this study.

Analysis and discussion

EOD in this study comprised three interrelated components, specifically risk-taking, proactiveness and innovativeness. Studies have postulated that SMEs in BIE with these three components tend to make bold business decisions. However, the present study found evidence that the relationship between EOD and financial performance of SMEs is statistically significant [H1](#). Researchers [Abbas et al. \(2020\)](#); [Arshad and Rasli \(2018\)](#); [Ayuso and Navarrete-Báez \(2018\)](#) also found similar results on the relationship between EOD and financial performance. Therefore, the present study confirms [H1](#); thus, [H1](#) is accepted.

Second, this study examined the correlation role of the BIE on the relationship of EOD and the FP of SMEs. The relationship considers EOD and SMEs performance as an important factor in correlating the relationship of EOD with the financial performance of manufacturing SMEs in Ghana ([Anderson and Eshima, 2013](#); [Wiklund and Shepherd, 2003a, b](#)) [H2](#). [H2](#), However, the BIE is tested as a moderator in EOD's relationships with financial performance of SMEs. The present study examines and presented that the EOD–SME's relationship is positively significant and the relationship improved by the correlation BIE. [H3](#) cantered on the correlation function of BIE in the relationship between EOD and overall performance of SMEs. Correlating outcomes of BIE on the relationship between EOD and overall performance of SMEs discovered positively significant which is against the study of ([Muthuvelayutham and Jeyakodeeswari, 2014](#)) in the Indian context. A non-supportive BIE can be damaging due to the innovativeness of SMEs in Ghana. Unsurprisingly, the BIE in Ghana is acknowledged as unfavourable ([Wu, 2009](#)). It is a challenge for SMEs to buy critical resources and obtain high-risk business opportunities in an unsupportive BIE. BIE positively strengthens the relationship of EOD with the financial performance of manufacturing SMEs.

Managerial implications

The results of this study have some straightforward implications for owner-managers. Firstly, EOD highlight that possessing good EOD in BIE has a universally positive effect on manufacturing SMEs financial performance and that manufacturing SMEs will benefit from developing skills, experience, increase profit margins, promote innovations, products quality and competitive advantages. Companies without good BIE can only achieve over or above-average performance by being highly entrepreneurial, combined with the adoption of EOD practices. Other combinations of EOD and BIE will generally result in poor financial performance for manufacturing SMEs without good BIE. Secondly, SMEs with good BIE would be well advised to choose one of the three specific EOD practices. Managers in manufacturing SMEs should concentrate on being EOD oriented in BIE innovatively. Thus, managers of SMEs with good BIE are advised not to adopt “middle-of-the-road” strategies when managing resources and instead adapt the level of EOD.

Academics' implications

The implications of this research contributes little knowledge to entrepreneurship, management, marketing literature and empirically for university students, university lectures and universities bodies. This study proved that risk-taking, innovativeness and proactiveness have a positive impact on manufacturing SMEs financial performance that can be used in academic papers. This present study found evidence that the relationship between EOD and financial performance of SMEs is statistically significant. Therefore, the present study confirm [H1](#); thus, [H1](#) is accepted [H2](#), However, the BIE is tested as a moderator in EOD's

relationships with financial performance of SMEs. The present study examines and presented that the EOD–SME's relationship is positively significant and the relationship improved by the correlation BIE. H3 centered on the correlation function of BIE in the relationship between EOD and overall performance of SMEs positively.

Policymaker's implications

This study offers many implications for directors, regulatory bodies, government agencies and NGO to reshape their business operations policies, governance, laws and strategies to improve manufacturing SMEs EOD and BIE by providing quality products and service through customer-centric approach. Reshaping may include providing training and development services, workshop and affordable loans facilities.

Limitations and future research directions

Only three types of EOD variables: risk-taking, pro-activeness, innovation have been examined in the present study, and other EOD practices are also likely to correlate SMEs financial performance relationship. Although these exploitation practices are highly established in the entrepreneurship and marketing literature, it would be of interest to examine full EOD and more specifically focussing on autonomy and aggressiveness (Lepak and Snell, 1999; Lepak and Snell, 2002), and how these correlate the relationship between BIE, EOD and SMEs financial performance. Moreover, EOD is sometimes measured as three and five separate constructs: risk-taking, pro-activeness, autonomy aggressiveness and innovation (Anderson *et al.*, 2015; Kreiser *et al.*, 2013) and examination of the separate effect of each variable would provide a more detailed explanation of how EOD affects the exploitation of BIE. For future recommendations, this study suggests researchers to find the effects and implications of EOD as an intervening variable to check SMEs financial and other performances.

Conclusion

This research aimed and proposed to analyse and built correlation results of BIE relationship between EOD and financial performance of SMEs in Ghana evidence collected from the manufacturing SMEs sector of Ghana. The statistical outcomes reveal that each relationship is significant which explains the three dimensions of EOD (risk-taking, pro-activeness, innovativeness). EOD is having fantastic and full-size effect with financial performance of manufacturing SMEs. Also, correlating effects of BIE, statistical outcomes from SPSS defined that correlating results were positive and improves the overall financial performance of manufacturing SMEs in Ghana. Manufacturing SMEs should focus on improving their EOD capabilities (risk-taking, pro-activeness, innovativeness) in BIE. Because these capabilities help in manufacturing SMEs to improve their financial performance in the marketplace to achieve competitive advantages. The findings of this study provide insights adaptabilities of BIE and EOD practices by illustrating interaction between BIE, EOD and manufacturing SMEs financial performance. Moreover, the study illustrates the usefulness of EOD for examining the exploitation of manufacturing SMEs in BIE for academics practitioners-marketers and entrepreneurs, policymakers, regulatory bodies, the government and NGO.

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Further reading

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