

Entrepreneurial orientation, passion for work, perceived environmental dynamism and firm performance in an emerging economy

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Abstract

Purpose – Previous scholarly studies have concluded that entrepreneurial orientation (EO) positively relates to firm performance and that relationship is dependent on several contingencies. The purpose of this paper is to show how managers' passion for work and the external environment (i.e. environmental dynamism) within which firms operate interactively impact on EO-firm performance relationship.

Design/methodology/approach – This theoretically derived research model is empirically validated using survey data from 250 small- and medium-sized enterprises (SMEs) operating in Ghana.

Findings – The study's empirical findings indicate that passion for work strengthens the EO-performance relationship in dynamic market environments.

Research limitations/implications – The cross-sectional design of the study does not permit causal inferences to be made regarding the variables examined. Future studies may use longitudinal design to examine the causal links of the variables.

Practical implications – The study's findings provide managers with a deeper understanding of how to achieve superior product firm performance, especially when firms are entrepreneurially oriented. The understanding of this issue can promote the development and maintenance of further entrepreneurial ventures in developing economies.

Originality/value – The paper has a strong theoretical value because to the best of authors' knowledge, this study is the first to examine the moderating role of passion for work on the relationship between EO and firm performance in dynamic environments.

Keywords Ghana, Entrepreneurial orientation, Emerging economy, Passion for work, Perceived environmental dynamism

Paper type Research paper

1. Introduction

Previous scholarly enquiry has been substantial around the entrepreneurial orientation (EO) construct (Zahra *et al.*, 1999; Rauch *et al.*, 2009; Covin and Lumpkin, 2011). Scholars have pursued a diverse set of objectives; including the identification of factors that predict EO (e.g. Miller and Friesen, 1982a; Zahra, 1991), the identification of EO's effect on various dimensions of firm performance (Lee *et al.*, 2001; Zahra and Covin,



1995), and the identification of variables that moderate the EO-performance relationship (e.g. Covin and Slevin, 1988; Lumpkin and Dess, 2001; Yusuf, 2002).

Earlier research has been consistent in showing that the strength of the EO-performance linkage depends on various contingencies (Lyon *et al.*, 2000; Wiklund and Shepherd, 2005; Rauch *et al.*, 2009), including external conditions (e.g. Zahra and Covin, 1995) and internal variables (e.g. Covin *et al.*, 2006). In terms of the latter, recent research has suggested that EO needs to be properly managed within the firm to reap its full potential (Wales *et al.*, 2013; Engelen *et al.*, 2015). Consequently, researchers have begun to examine the role of internal influencers on EO-firm performance linkage (e.g. Covin *et al.*, 2006; Engelen *et al.*, 2015). To extend this line of scholarly inquiry, this study examines whether the relationship between EO and firm performance is contingent upon managers' passion for work. The present study extends research on how EO interacts with top managers' passion for work to increase firm performance by arguing that passion for work plays a central role in converting EO into improved performance.

A number of studies on passion has emerged in the literature (e.g. Baum and Locke, 2004; Baum *et al.*, 2001; Chen *et al.*, 2009; Cardon *et al.*, 2009, 2013).

The current study's conceptualization of passion for entrepreneurial work reflects the extent to which people "love" to work and derive joy from investing in work-related activities (Baum and Locke, 2004; Shane *et al.*, 2003). Passion for work captures an emotional aspect of people's approach to work (Frijda *et al.*, 1991; Vallerand *et al.*, 2003). Moreover, it also relates to cognition in the sense that people who are passionate about work tend to engage in more intensive and systematic knowledge processing when task-related expectations require it (Frederickson, 1998; Ho *et al.*, 2011). As a consequence, this study follows previous research that conceived passion as a trait variable (e.g. Baum *et al.*, 2001; Baum and Locke, 2004).

A major argument is that given the uncertain success of introducing new products and services, and the challenges of developing new organizations with limited resources, passion can become a key driver of entrepreneurial action (Cardon *et al.*, 2013). Thus, managers' passion for can serve as complementary resource that can translate firms' entrepreneurial activities into improved firm performance. Therefore, the present study extends research on how EO interacts with individual-level characteristics to increase firm performance by arguing that passion for work plays a critical role in converting EO into improved performance. A major insight is to argue that, while EO provides direction for organizations to pursue new opportunities in the marketplace, effective implementation of EO requires passion for work on the part of top management. For instance, Shane *et al.* (2003, p. 259) indicated that "the entrepreneurial process occurs because people act to pursue opportunities." This suggests that the field of entrepreneurship recognizes the significant role that individual's passion for work play in implementing entrepreneurial activities.

In order to develop a nuanced understanding of how EO and passion for work interact, this study also examines how the dynamism of the environment in which the firm operates influences the interaction of EO and passion for work. Extant literature suggests that affect particularly passion occurs against a backdrop of powerful environmental variables (e.g. Baron and Tang, 2011). This study contends that the enhancing role of managers' passion for work on the EO-performance relationship should be strongest in environments characterized by constant flux based on the assumption that passion is the most valuable resource in dynamic environments (Baas *et al.*, 2008). This suggests that the moderating effect of passion for work on the relationship between EO and firm performance will be stronger in environments

that generate high levels of activation than those that generate lower levels of activation. In these environments, the generation of new information and knowledge appears particularly important for entrepreneurial firms, as does a timely response to new circumstances. Therefore, this study argued that the moderation of passion for work on the relationship between EO and performance is stronger when the environment is in a state of flux than when it is static.

Against this background, the present study examines the following research questions:

RQ1. How do the characteristics and actions of individual managers ultimately moderate the relationship between EO and firm performance?

RQ2. How does perceived environmental dynamism moderate this relationship?

Essentially, this study argues that passion for work can occur against the backdrop of environmental variables. Consequently, passion for work perspective was developed to answer the question concerning what changes are likely to occur to the EO-performance relationship when the firm's environment is characterized by constant change. The study's hypotheses were tested using survey responses provided by top managers of small- and medium-sized enterprises (SMEs) operating in Ghana.

In addressing these research questions, the present study makes two specific contributions to the literature. First, and most generally, it seeks to contribute to current efforts to examine the influence of the characteristics of individual managers in implementing entrepreneurial activities. Specifically, this study examines the moderating effect of passion for work on the relationship between EO and firm performance. In doing so, this study addresses the call to consider the role of internal influencers in implementing EO (e.g. Covin *et al.*, 2006; Engelen *et al.*, 2015). This is because prior studies have largely investigated how EO can be aligned with factors outside the firm to obtain superior performance (e.g. Stam and Elfring, 2008; Tan and Tan, 2005). However, limited research has focussed on those internal factors that are likely to affect the connection between EO and firm performance inside organizations (e.g. Covin *et al.*, 2006; Engelen *et al.*, 2015). Clarifying the mechanisms through which individual managers influence firm-level outcomes is particularly important because it answers the question of which personal factors might facilitate or impede the conversion of EO into high firm performance. Such a role has been predicted on the basis of existing theory and research (Baron, 2008; Lyubomirsky *et al.*, 2005), but has only recently become a subject of ongoing research in the field of entrepreneurship (e.g. Foo *et al.*, 2009). Passion, particularly affect, has been found to exert strong and consistent effects on many important organizational processes (e.g. Brief and Weiss, 2002; Isen and Labroo, 2003).

Second, it has been suggested that greater insight into firm performance can be gained by investigating the integrative mechanisms that involve a simultaneous and joint consideration of firms' internal influencers and business environmental factors (Wiklund and Shepherd, 2003).

The role of passion in influencing the EO-firm performance relationship may be affected by exogenous influences. Extant research has suggested that these effects, when they occur, do so against a backdrop of powerful environmental variables (Baron and Tang, 2011). Therefore, it has been shown that passion can have strong effects on the domain of entrepreneurship because the environments in which entrepreneurs operate are highly unpredictable and consistently show signs of rapid change (Baron, 2008; Mitchell *et al.*, 2007). Research on the influence of passion further indicates that it

is precisely in such environments that passion exerts its strongest effects on cognition and behavior (e.g. Forgas, 2000; Forgas and Smith, 2007). Therefore, it has been suggested that passion can strongly influence entrepreneurs launch and implementation of entrepreneurial ideas (e.g. Diener and Seligman, 2002; Forgas, 2000).

The above considerations and a growing empirical evidence for the important role of passion in the pursuit of entrepreneurial activities strongly show the usefulness of examining how passion influences EO-performance linkage. Accordingly, this study contends that the effect of passion for work on the EO-firm performance relationship varies according to different levels of environmental dynamism. Therefore, passion for work was introduced as a cognitive resource to extend the RBV and to answer the question concerning what changes are likely to occur when the firm's environment is characterized by constant change. In so doing, this study adds environmental dynamism as an important boundary condition to the passion literature.

In the section that follows, the theoretical background and research hypotheses as displayed in Figure 1, are presented. Next, the research methods and the development of the measures are presented. This is followed by the study's analytical approaches including an evaluation of the measures and an assessment of the hypotheses. The results of the tests of our hypotheses are presented. The study concludes with a discussion of its theoretical contributions to the literature and the managerial implications.

2. Theory and hypotheses

2.1 Theoretical model

This study examines the effect of EO by drawing on research from the RBV (Barney, 1991), contingency theory (Venkatraman and Prescott, 1990), and regulatory focus theory (Higgins, 1997). The notion behind the RBV lies in understanding the conditions under which resources, internal capabilities, and market environment enable firms to achieve sustained and superior performance (Barney, 1991; Barreto, 2010; Kraaijenbrink *et al.*, 2010). According to the RBV, firms are unequally distributed bundles of resources (Wernerfelt, 1984) that create resource heterogeneity which persists over time, and provides a basis for firm performance (Barney, 1991). A major view of the RBV is that a firm can achieve a competitive advantage if it acquires and controls valuable, rare, inimitable, and non-substitutable resources and capabilities and effectively deploy them in its dynamic market environment (Tece *et al.*, 1997). In this regard, a firm can attain competitive advantage if it has greater success than its current and potential industry competitors (Peteraf and Barney, 2003).

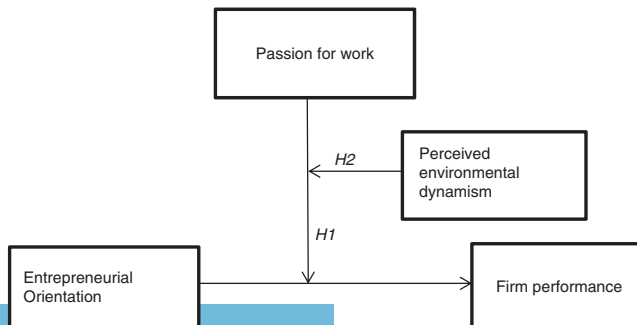


Figure 1. Conceptual model

Firms' EO is thus viewed as a strategic resource that may provide a firm with the ability to compete in target markets by offering customers products and services with added and/or different sources of value relative to competitors (Kim and Park, 2010; Schilke, 2014).

Specifically, this study contends that the relationship between EO and firm performance is hypothesized to be stronger at high levels of managers' passion for work, and that the moderating effect of passion on EO-firm performance relationship is stronger when the environment is in a state of flux. This study contends that SMEs in an emerging country context lack all aspects of the VRIO (valuable, rare, inimitable and organizing) espoused by Barney (1991). The RBV provides some insight as to possible outcomes when some, but not all, of the VRIO criteria are present. For instance, SMEs that possess a cognitive resource advantage may be able to generate advantage from their strategically valuable resources such as EO. Hence, the expectation is that positive growth results from entrepreneurial, resource-rich firms. Consequently, the EO-performance relationship is expected to be strongest when the complete VRIO criteria are present in SMEs operating an emerging economy.

In keeping with this notion, strategic orientation (e.g. EO) describes what a firm strategically does. Accordingly, in the light of the current study, EO is defined as firms' proclivity to explore new market opportunities (Lumpkin and Dess, 1996; Matsuno *et al.*, 2002), and it manifests itself through a firm's tendency to accept innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy (Lumpkin and Dess, 1996). The EO research that draws on the RBV perspective has explained why EO serves as a basis for higher firm performance. First, greater EO means that firms are more likely to pursue an opportunity-seeking orientation involving the process of exploring market areas that offer future advantages to the firm (Wiklund and Shepherd, 2011). With its emphasis on exploratory activities, firms with high levels of entrepreneurial-oriented processes are proficient in creating new organizational forms and industry configurations and are capable of shaping market arrangements to their advantage (Baker and Sinkula, 2009).

However, while many studies and meta-analysis largely confirm the positive contributions of EO (Rauch *et al.*, 2009), relatively few studies have found no positive relationship between EO and firm performance (e.g. Ireland *et al.*, 2003). Moreover, extant research has been more consistent in showing that the strength of the EO-firm performance relationship depends on various contingencies (Lyon *et al.*, 2000), including external conditions (e.g. Zahra and Covin, 1995) and internal variables (e.g. Covin *et al.*, 2006). Thus, the notion that EO benefits firms irrespective of the conditions under which they operate provides an incomplete understanding of EO and its relationship with firm performance.

In addressing this issue, this study argues that these mixed results support the notion that the benefit of EO depends on external environmental pressures (e.g. Lumpkin and Dess, 1996) as well as internal firm-specific factors (e.g. Covin and Slevin, 1991; Engelen *et al.*, 2015). In addition, other scholars have argued that there is a need for further research to examine the extent to which firm's internal influencers facilitate or hinder performance and productivity of a firm's EO activities (e.g. Covin *et al.*, 2006; Engelen *et al.*, 2015).

This study suggests EO is a resource that can enhance firm performance and passion is a cognitive process that serves as a complementary resource that if aligned with EO will help enhance firm performance. Several perspectives lead to a conclusion that individuals' passion for work can help as a complementary resource for enhancing

strategy implementation in organizations. First, according to the identity perspective in role investment theory, individuals will invest their cognitive attention and time in a role they find important and pleasurable (i.e. a role that they are passionate about) because it provides them with a source of self-esteem and self-actualization (Kanungo, 1979; Lobel, 1991; Rothbard and Edwards, 2003). Second, based on the utilitarian perspective, individuals tend to invest more time and effort in roles that they find enjoyable and pleasurable because of basic hedonistic tendencies (McAllister, 1953). Therefore, this study draws on fundamental premises in regulatory focus theory (Higgins, 1997) and contingency theory to develop a nuanced understanding of how EO and passion for work interact in dynamic market environments in which the firm operates.

The regulatory focus theory highlights the fact that individuals may not attach similar weight to potential positive outcomes (opportunities) as to the potential negative outcomes (Higgins, 1997). This study argues that the facilitating role of passion for work on the EO-firm performance relationship should be the strongest in dynamic markets based on the assumption that individual characteristics like passion for work will generate high outcomes in dynamic environments (Baron and Tang, 2011). A major assumption of regulatory focus theory is that individuals may approach pleasure and avoid pain in different ways (Brocker *et al.*, 2004). This assumption is reflected in two major self-regulatory systems; that is “promotion focus” and “prevention focus.” The main difference is that individuals using “promotion focus” highlight the potential gains, while those individuals using “prevention focus” concentrate on avoiding potential losses (Brocker *et al.*, 2004). The notions of “promotion focus” and “prevention focus” are consistent with the entrepreneurial thinking that recognizing, reshaping, and responding to opportunities lie at the nexus of the individual and the environment (Shane and Venkataraman, 2000).

With specific regard to the contingency theory, a key premise is that managerial actions are affected by forces in the external environment. Previous research has indicated that the environments in which a firm operates play a critical role in determining a firm’s strategy (Covin and Slevin, 1991). This study argues that when dynamic market environments is volatile and managers experience feelings of pleasantness and joy when engaging in intensive work-related activities (Baum and Locke, 2004; Richie *et al.*, 1997), the benefit the firm obtains from its EO is greater. In these environments, the generation of new information and knowledge appears particularly important for entrepreneurial firms, as does a timely response to new circumstances.

2.2 Moderating effect of passion for work

A crucial but also underexplored personal characteristic with potential relevance to EO is managers’ passion for work. As such, this study focusses on managers’ passion for work in general, rather than passion for entrepreneurship. This is because the present study is not interested in the direct effects of managers’ passion on firm performance, but rather in how their passion for work leverages high EO-firm performance outcomes. A major rationale for aligning managers’ passion for work with EO is that, scholars have cautioned that organizations find it difficult in translating EO into performance benefits when it is not properly aligned with the firm’s internal influencers (Gupta *et al.*, 2004). Managers’ passion for work is conceived as the amount of cognitive resources (Gardner *et al.*, 1989) spent in implementing firms’ strategy. This cognitive resource is likely to complement firms’ resources to produce enhanced performance.

Empirical works portray passion as a valuable characteristic that unequivocally yield positive outcomes (Baum and Locke, 2004; Baum *et al.*, 2001). Such passion reflects not only an emotional element but also a cognitive resource, as it influences the mental efforts that people are willing to allocate to work-related activities. As such, this study argues for a positive moderating effect of managers' passion for work on the relationship between EO and firm performance. This is because the extent to which managers experience feelings of joy when engaging in work-related activities stimulates them not only to process and store work-related knowledge, but also to effectively retrieve and apply the knowledge and skills when expected (Cardon *et al.*, 2009; Foo *et al.*, 2009).

This study further contends that the skills and knowledge resources of managers are able to develop capabilities that translate into enhanced task performance. Extant research suggests that individuals with more harmonious passion are immersed in their work-related activities and such individuals devote more psychic energy to them, which in turn leads to better work performance (Ho *et al.*, 2011). However, the application of relevant abilities demands commitment (Kuratko *et al.*, 1997) which tends to fuel those specific processes, practices, and behaviors that allows a firm to act in an entrepreneurial way (Covin and Slevin, 1991; Lumpkin and Dess, 1996). Therefore, the passion that managers feel about their work in general can invigorate the instrumentality to act entrepreneurially because this individual characteristic informs the cognitive efforts that they are willing to expend to exploit the current knowledge resources (Baum and Locke, 2004). Moreover, individuals with a strong passion for work are internally driven to persevere to exploit current market opportunities which can influence firm's performance (Baum and Locke, 2004).

Additionally, it has been established that successful entrepreneurial firms engage in risky activities (Lumpkin and Dess, 2001). However, since EO is a firm-wide phenomenon, entrepreneurial activities are typically enacted by a large number of top-level managers, if not all of them. The enactment of EO depends on managers' passion and willingness to engage in entrepreneurial activities. Non-managerial individuals in entrepreneurial firms often resist engaging in these "risky" entrepreneurial endeavors (Monsen and Boss, 2009). Therefore, a high degree of managerial passion for work ensures that managers and non-managers involved in enacting entrepreneurial activities have the motivation required to determine their firm's performance outcome. On the basis of these arguments, we expect that the higher the passion for work, the greater the likelihood that EO will enhance firm performance. This study, therefore, hypothesizes that:

H1. Passion for work positively moderates the relationship between EO and firm performance.

2.3 Joint effects of passion for work and perceived environmental dynamism

To understand the boundary condition and the role of passion for work on the link between EO and firm performance, this study further investigate how environmental dynamism impacts EO-firm performance relationship. Dynamism refers to the extent to which the environments in which firms operate are subject to unpredictable and rapid change and subsequently to high levels of uncertainty (Dess and Beard, 1984; Miller, 2007). The literature on passion conceptually argues that passion for work can be more valuable in dynamic market environments because it allows managers leading their firms in dynamic environments to deal with the turbulence and uncertainty as these

dynamic environments generate high levels of activation (Baron and Tang, 2011; Baas *et al.*, 2008). Based on this insight, this study argues that dynamic environments can relate to the moderating effect of passion for work on EO-firm performance relationship.

The extant management literature argues that entrepreneurship is marked by high levels of passion (e.g. Bird, 1989; Cardon *et al.*, 2009; Chen *et al.*, 2009). Thus, this study argues that passion is important in leveraging EO's full potential in entrepreneurial firms. This is because the extent to which people experience feelings of joy when engaging in work-related activities does not only make them support entrepreneurial activities, but to focus their cognitive efforts toward exploiting knowledge resources to develop capabilities to manage environmental pressures (Kogut and Zander, 1992; Cardon *et al.*, 2009; Foo *et al.*, 2009). These feelings appear to be even more important when environmental dynamism is rapid. This suggests that the moderation effect of passion for work on the relationship between EO and firm performance will be much stronger in dynamic environments that generate high levels of activation than ones that generate lower levels of activation. Essentially, highly dynamic environments are more likely to induce high levels of activation among managers than less dynamic environments.

Highly dynamic environments are unpredictable and filled with rapid and dramatic change which often involves high levels of uncertainty and risk, plus the necessity for making key decisions on the basis of incomplete information (e.g. Aldrich, 2000; Miller, 2007). Thus, for these reasons, levels of activation among managers are likely to be higher in dynamic than stable markets environments. Under such conditions, passion can become suitable for enhancing the positive impact of EO on performance. This is because it has been established that the greater the passion with which people undertake work-related tasks, the greater their ability to reduce uncertainty in meeting corresponding work-related goals as such intensity exposes them to a greater variety of options for solving challenging situations (Frederickson, 1998; Ho *et al.*, 2011; Vallerand *et al.*, 2003). Prior research suggests that the application of current managerially relevant abilities demands perseverance and commitment (Kuratko *et al.*, 1997) which should be fueled by the passion and intensity with which people undertake work-related activities (Chen *et al.*, 2009). Thus, the passion that someone feels about work in general can invigorate the implementation of EO for increasing firm performance. Therefore, the facilitating role of passion for work on the effect of EO on firm performance may become stronger when firms operate in dynamic, as opposed to stable industry environment. On the basis of this reasoning, this study hypothesizes that:

- H2.* The moderating effect of passion for work on the relationship between EO and firm performance is stronger when environmental dynamism is high than when it is low.

3. Method

3.1 Sample and data

This study defines an SME as a firm with <250 employees and below \$US10. The definitional criteria of an SME in Ghana stems from a 2006 national survey of Ghanaian businesses conducted by the Ghana Statistical Service (2006). Potential survey respondents that met the SME definitional criteria were then randomly selected from the Ghana Business Directory, Registrar General's

Department, Association of Ghana Industries (Acquaah, 2007) to test the hypotheses which yielded an initial sample of 2,150 SMEs.

This study collected data through the on-site administration of a questionnaire. A letter sent to CEOs requested that the chief executive or another member of the top management team complete the questionnaire. Several measures were taken to bolster the response rate. First, support was obtained from a local government agency that endorsed the study, as well as verbal agreement from the ventures' top management about their willingness to participate in the study. Second, the participants were promised a summary report of the study. Usable responses were received from 250 firms yielding 11.6 percent response rate. Analysis of respondents' profiles revealed that 65 percent of surveys were completed by the chief executive and the remaining were completed either by another member of the top management team (approximately 25 percent) or by a direct report to the management team (10 percent). Therefore, the study's survey questionnaires were completed by senior managers. To assess non-response bias, this study compared early and late respondents and found no significant difference in the study (Armstrong and Overton, 1977). Multivariate *t*-tests with EO, passion for work, environmental dynamism, and firm performance showed no significant difference between early and late respondents, suggesting that non-response bias is not a concern in the data.

3.2 Measures

This study measured all constructs, using well-established measures. Table I displays specific items used to measure the constructs and their respective factor loadings and *t*-values.

EO. This study conceptualized EO as a five-dimensional construct which entailed propensity to innovate, propensity to take risks, the proclivity to be proactive, tendency to be competitively aggressive, and the tendency to encourage autonomous behavior (Lumpkin and Dess, 1996). Items measuring the dimensions were adapted from existing literature (e.g. Covin and Slevin, 1989; Jambulingam *et al.*, 2005). Each scale was measured on a seven-point rating scale with anchors: 1 = not at all; and 7 = to an extreme extent. Four items measured the innovativeness and autonomy constructs while three items each were used to assess risk-taking, proactiveness and competitive aggressiveness. The reliability of innovativeness ($\alpha = 0.94$), risk-taking ($\alpha = 0.96$), proactiveness ($\alpha = 0.93$), competitive aggressiveness ($\alpha = 0.89$), and autonomy ($\alpha = 0.88$) were well above the recommended threshold.

Passion for work. Following prior studies (e.g. Baum and Locke, 2004; De Clercq *et al.*, 2011), passion for work was measured with five items that reflect the extent to which managers love work. Sample items assess the level of agreement with statements such as "our top management loves to work hard" and "our top management derives most of their life satisfaction from working hard" with a reliability coefficient of ($\alpha = 0.93$).

Environmental dynamism. This study measured environmental dynamism by following Miller (1987). All the items from environmental dynamism scale was measured on a seven-point scale with anchors "strongly disagree" and "strongly agree." The Cronbach's α -value for environmental dynamism was 0.94. This suggests that the scale was reliable (Hair *et al.*, 2006).

Firm performance. This study used a three item, seven-point subjective performance scale to measure firm performance. Each respondent was asked to compare their firm's performance with their intra-industry rivals on sales and employee growth rate. The sales performance indicators (two items) tapped top managers' evaluation of firm's

Item description	Loading (t-values)
<i>Innovativeness (Jambulingam et al., 2005): $\alpha = 0.95$; CR = 0.85; AVE = 0.69</i>	
Our company is known as an innovator among businesses in our industry	0.88 (fixed)
We promote new, innovative product in our company	0.75 (11.47)
Our company provides leadership in developing new products	0.86 (14.34)
Our company is constantly experimenting with new products	0.78 (12.76)
We have built a reputation for being the best in our industry to develop new methods and technologies	0.83 (13.44)
<i>Risk-taking (Jambulingam et al., 2005): $\alpha = 0.86$; CR = 0.87; AVE = 0.69</i>	
Top managers of our company, in general, tend to invest in risky projects	0.93 (fixed)
This company shows a great deal of tolerance for high-risk projects	0.96 (21.78)
Our business strategy is characterized by a strong tendency to take risk	0.86 (13.44)
<i>Proactiveness (Jambulingam et al., 2005): $\alpha = 0.79$; CR = 0.88; AVE = 0.71</i>	
We seek to exploit anticipated changes in our target market ahead of our rivals	0.86 (fixed)
We seize initiatives whenever possible in our target market operations	0.84 (15.86)
We act opportunistically to shape the business environment in which we operate	0.87 (18.28)
<i>Competitive aggressiveness (Covin and Slevin, 1989; Jambulingam et al., 2005): $\alpha = 0.93$; CR = 0.94; AVE = 0.65</i>	
We typically adopt an "undo-the-competitor" posture in our target market	0.85 (fixed)
We take hostile steps to achieve competitive goals in our target markets	0.83 (14.92)
Our actions toward competitors can be termed as aggressive	0.87 (13.76)
<i>Autonomy (Jambulingam et al., 2005): $\alpha = 0.83$; CR = 0.85; AVE = 0.69</i>	
Personnel behave autonomously in our business operations	0.78 (fixed)
Personnel act independently to carry out their business ideas through to completion	0.78 (8.14)
Personnel are self-directed in pursuit of target market opportunities	0.88 (11.13)
<i>Market orientation (Vorhies and Morgan, 2005): $\alpha = 0.86$; CR = 0.77; AVE = 0.65</i>	
Our top managers are able to gather information about customers compared to most important competitors	0.85 (Fixed)
We are able to use market research skills to develop effective marketing programmes	0.87 (14.23)
Our top managers have the ability to track customer wants and needs compared to most competitors	0.78 (11.34)
We are able to make full use of marketing research information compared to most important competitors	0.88 (15.23)
This company is able to analyze its market information compared to most important competitors	0.85 (14.57)
<i>Environmental dynamism (Miller, 1987): $\alpha = 0.94$; CR = 0.87; AVE = 0.73</i>	
Growth opportunities in the environment have increased dramatically	0.71 (fixed)
Production/service technology in your principal industry has remained the same (reversed coded)	0.88 (16.89)
Rate of innovation of new operating processes and new products or services in your principal industry rate has fallen dramatically (reversed coded)	0.76 (11.23)
Research and development (R&D) activity in your principal industry has substantially increased	0.84 (13.76)
<i>Passion for work (Baum and Locke, 2004): $\alpha = 0.93$; CR = 0.84; AVE = 0.69</i>	
Our derives most of their life satisfaction from working hard	0.72 (10.12)
Our top management loves to work hard	0.85 (fixed)
	0.87 (16.68)

(continued)

Table I.
Constructs, measurement items and reliability and validity tests

Item description	Loading (t-values)
Out top management looks forward to returning work when they are away from it	0.84 (13.71)
Our top management accomplish a lot because they love to work hard	0.72 (10.12)
Sometimes our top management team wish that they could work harder when they are not	0.68 (9.78)
<i>Firm performance (Anderson and Eshima, 2013): $\alpha = 0.88$; $CR = 0.85$; $AVE = 0.77$</i>	
Top managers' evaluation of sales volume compared to rivals in the last three years	0.89 (fixed)
Top managers' evaluation of sales growth rate compared to rivals in the last three years	0.75 (11.58)
Top managers' evaluation of company overall growth in full-time employees compared to rivals in the last three years	0.87 (16.68)
Notes: CR, composite reliability is the sum of the square roots of the item-squared multiple correlations squared and divided by the same quantity plus the sum of the error variances (Werts <i>et al.</i> , 1974); AVE, average variance extracted = $\Sigma[\lambda_i^2]Var(X)/\Sigma[\lambda_i^2]Var(X)+\Sigma[Var(\epsilon_i)]$ where λ_i is the loading of x_i on X , Var denotes variance, ϵ_i is the measurement error of x_i , and Σ denotes a sum (Fornell and Larcker, 1981).	

Table I.

sales volume and sales growth relative to market objective. Regarding the employment growth, this indicator tapped top managers' evaluation of employment growth relative to rivals. The use of subjective performance measures has been long employed in management research (e.g. Lawrence and Lorsch, 1967; Covin and Slevin, 1989; Tan and Peng, 2003; Acquaah, 2007; Boso *et al.*, 2013; Anderson and Eshima, 2013). This study used subjective performance scale because many firms in developing countries are hesitant to share objective accounting data because of widespread tax evasion (Malik and Kotabe, 2009). In such a context, obtaining reliable and objective accounting driven measures is difficult because of differences in accounting procedures and the willingness of survey respondents to make a discloser of their firms' financial performance (Dess and Robinson, 1984; Powell, 1992). Second, some scholars have argued that founders' perception of the small firm's success or failure is a stronger motivational influence on managerial choices (e.g. Dess and Robinson, 1984; Powell, 1992). The combined mean of the scale measures constitute the variable score. Cronbach's α -value for the combined mean was $\alpha = 0.88$, indicating high reliability (Hair *et al.*, 2006).

Control variables. Several additional firm and individual variables were controlled for in order to rule out alternative explanations of the findings (Turnley and Feldman, 2000). Each of the controls was treated in estimation as a single latent variable. Firm age was measured as the number of years the firm has been in operation (George, 2005). Firm age was log transformed to normalize its distribution and then standardized before inclusion in the research model (Anderson and Eshima, 2013). To prevent skewness, firm size was measured as the natural logarithm of the number of employees of the firm (Sheng *et al.*, 2011). Market scope is a dummy variable that captures the extent to which a firm is local or regionally focussed or is nationally or globally oriented (0 = regional/local; 1 = national/international). For industry type, an industry dummy with 1 = manufacturing, and 2 = services was created (Wang, 2008).

Firm's market orientation was generated by aggregating the four dimensions of a firm's ability to analyze the market and manage market information, an indicator from Vorhies and Morgan's (2005) marketing capability scale. Incorporating this control, market orientation, is important since research shows that EO and market orientation interact in impacting firm performance (Atuahene-Gima and Ko, 2001; Bhuian *et al.*, 2005; Li *et al.*, 2008; Boso *et al.*, 2013).

3.3 Reliability and validity assessment

To evaluate the reliability and validity of each construct, an exploratory factor analysis was run for the sample. Items were further refined in confirmatory factor analysis (CFA) using LISREL 8.5. The final CFA results show a good fit to the data. A satisfactory model fit was obtained: χ^2 (degrees of freedom (df)) = 840.16 (482); $p < 0.00$; root mean square error of approximation (RMSEA) = 0.05; non-normed fit index (NNFI) = 0.94; and comparative fit index (CFI) = 0.92. Factor loadings for each construct are significant at 1 percent for sample, which supports convergent validity of the measures (Bagozzi and Yi, 1988).

Reliability was assessed using two indicators of convergent and discriminant validity: composite reliability and average variance extracted (AVE). First, estimation of discriminant validity of the constructs was carried out by calculating the square roots of AVEs for all multi-item constructs (Table II). The results show that, for all constructs, each correlation of one construct with another is smaller than the square roots of its AVE, indicating discriminant validity for out measures (Fornell and Larcker, 1981). Therefore, the study's measured concepts differ significantly from each other (Bagozzi and Philips, 1982). Second, convergent validity was tested for the study's scales through the assessment of the composite reliability (CR). Estimates of CR above 0.60 and statistically significant concept-to-domain coefficients ($t > 2.0$; $p < 0.05$) are usually considered supportive of convergent validity (Bagozzi and Yi, 1988). All values had CR significantly higher than the stipulated criteria, and all items were statistically significant (Table I). Correlations between constructs are provided in Table II.

3.4 Common method variance assessment

This study relied on top management as a single source of data. Therefore, spurious associations between some of the variables of interest may emerge due to common method bias. According to the vast literature devoted to the subject, the confounding influence of common method bias on empirical results can be approached either procedurally or statistically (Podsakoff *et al.*, 2003). From a procedural point of view, great care was taken in the design of the questionnaire by separating the measurement of the predictor and criterion variables. Statistically, this study followed Cote and Buckley (1987) to test potential common method bias problems. Three competing models were estimated: method 1 involved estimation of the method-only model in which all indicators were loaded on a single latent factor: $\chi^2/df = 5,617.22/934 = 6.01$; RMSEA = 0.144; NNFI = 0.18; and CFI = 0.24; method 2 was a trait-only model in which each indicator was loaded on its respective latent factor: $\chi^2/df = 1,435.38/973 = 1.47$; RMSEA = 0.041; NNFI = 0.93; and CFI = 0.94; and method 3 was a method and trait model involving inclusion of a common factor linking all the indicators in Model 2: $\chi^2/df = 1,274.138/891 = 1.42$; RMSEA = 0.042; NNFI = 0.91; and CFI = 0.92. Three models were compared to reveal which one has excellent fit. The results indicate Models 2 and 3 are revealed superior fit than Model 1, and that Model 3 is not substantially better than Model 2. On the basis of these results, this study concluded that common method bias is not a major concern.

4. Results

Table II presents the means, standard deviations, and Pearson's correlations of all key variables. This study employed hierarchical regression analysis to test the hypotheses. Multicollinearity was assessed in each regression model using the variance inflation

Table II.
Descriptive statistics
and correlations^a

Sl.no.	Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1.	Firm size (in employees)	13.93	5.06									
2.	Firm age	28.78	7.75	0.14**								
3.	Market scope	0.46	0.54	-0.17**	-0.15**							
4.	Industry type	0.54	0.39	-0.07*	0.07*	-0.06*						
5.	Market orientation	4.12	1.05	0.15**	0.03	0.14**	-0.04	(0.80)				
6.	Entrepreneurial orientation	4.24	1.16	0.14**	0.09*	-0.02	0.02	0.14**	(0.84)			
7.	Passion for work	5.09	0.93	0.03	-0.01	0.06	0.04	-0.06*	0.03	(0.83)		
8.	Environmental dynamism	5.42	0.87	-0.05	0.04	-0.03	0.01	0.14**	0.19**	0.06*	(0.96)	
9.	Firm performance	5.00	0.74	0.08*	-0.09*	-0.07*	-0.04	0.18**	0.16**	0.17**	0.22**	(0.87)

Notes: *n* = 250, SD = standard deviation. The square root of average variance extracted in the diagonal. ^aLogarithm transformation of original variable. * **Correlation is significant at the 0.05 and 0.01 levels, respectively

factor (VIF) statistic. A VIF score > 4.0 may raise multicollinearity concerns. The VIFs for our regression models are well below 4.0 indicating no concerns regarding multicollinearity (Aiken and West, 1991). This study used mean-centered variables for all controls and independent variables in order to remedy potential multicollinearity issues. The variables were entered in the following sequence: control variables including (Model 1), direct effect of EO (Model 2), direct effect of passion for work (Model 3), direct effect of environmental dynamism (Model 4), direct effect of passion-squared (Model 5), two-way interaction between EO and passion for work, two-way interaction between EO and environmental dynamism, two-way interaction between passion for work and environmental dynamism (Model 6), three-way interaction among EO, passion for work and environmental dynamism (Model 7), and finally, *post hoc* analysis of the interaction between EO and passion-squared, and a three-way interaction of EO, passion-squared and environmental dynamism was estimated (Model 8).

Model 2 reveals a significant and positive relationship between EO and performance ($\beta = 0.31, p < 0.01$). This result is in line with prior research and with conceptual arguments on the EO-performance relationship (Rauch *et al.*, 2009).

H1 was tested in Model 6 where the two-way interaction term of EO and passion for work is included. The interaction term is significant and positive ($\beta = 0.43, p < 0.01$), which suggests that the positive effect of EO and passion for work on firm performance is mutually reinforcing. This finding supports *H1*, which states that EO and passion for work interact to affect firm performance. To determine the nature of the moderating effect, the interaction was plotted following the procedure advanced by Cohen *et al.* (2003). Figure 2 provides a clear illustration of the interactions by demonstrating the influence pattern (Table III).

As shown in Figure 2, at high levels of passion for work, increasing levels of EO have a significant positive effect on firm performance. Conversely, at low levels of passion for work, the effect of increasing levels of EO on firm performance is attenuated. This influence pattern lends further support to *H1*.

H2 predicts a three-way interaction effect among EO, passion for work, and environmental dynamism on firm performance. As hypothesized, the three-way interaction effect is positive and significant ($\beta = 0.52, p < 0.01$), indicating that the positive interaction effect of EO and passion for work on firm performance is heightened when environmental dynamism is high. Therefore, *H2* was also supported.

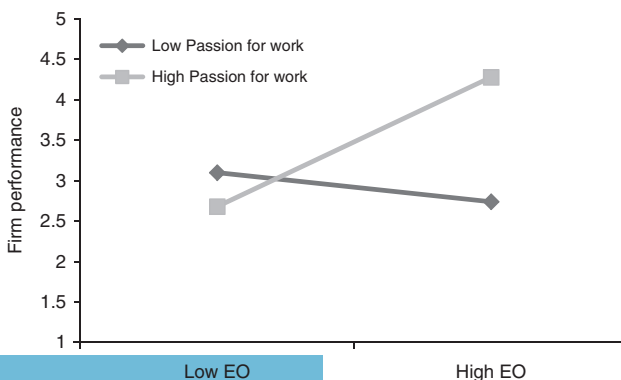


Figure 2. Interaction effect of EO with passion for work on firm performance

Table III.
Findings of
regression analyses

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
<i>Control variables</i>								
Firm age (years)	-0.11*	-0.07*	-0.09*	-0.03	-0.03	-0.12*	-0.07*	-0.09*
Firm size (employees)	0.13*	0.15**	0.06*	0.05	0.11*	0.05	0.14**	0.06*
Market scope	-0.04	-0.02	-0.01	-0.03	-0.05	-0.02	-0.05	-0.02
Industry type	-0.7*	-0.09*	-0.04	-0.07*	-0.07*	-0.09	-0.12**	-0.07*
Market orientation	0.14**	0.15**	0.10*	0.04	0.02	0.04	0.08*	0.05
<i>Main effect variables</i>								
Entrepreneurial orientation (EO)		0.31***	0.27***	0.14**	0.10*	0.15**	0.17***	0.19***
Passion for work (PW)			0.28**	0.22***	0.17***	0.27***	0.26***	0.20***
Perceived environmental dynamism (PED)				0.17***	0.17***	0.19***	0.22***	0.14**
PW-squared					0.37***	0.16***	0.14**	0.11**
<i>Two-way interactions</i>								
H1: EO×PW						0.43***	0.45***	0.47***
EO×PED						0.27***	0.33***	0.35***
PED×PW						0.25***	0.32***	0.36***
<i>Three-way interaction</i>								
H2: EO×PW×PED							0.52***	0.51***
<i>Post hoc</i>								
EO×PW-squared								0.57***
EO×PW-squared×PED								0.64***
<i>Model fit</i>								
F-value	14.33**	33.31***	36.02***	39.09***	36.32***	38.23***	41.13***	49.08***
Adjusted R ²	0.123	0.284	0.332	0.361	0.373	0.385	0.393	0.483
Mean VIF	1.63	1.70	1.44	2.48	1.63	1.99	2.34	2.08

Notes: *n* = 250. Dependent variable: firm performance. Critical *t*-values are 2.325, 1.645, and 1.282, respectively (one-tailed test as all hypotheses are one-directional). ****p* < 0.01, ***p* < 0.05; **p* < 0.10

The results suggest that EO and passion for work are mutually reinforcing and complementary in terms of their effects on firm performance and that this complementarity increases in dynamic environments. Figure 2 depicts the pattern of moderated results related to *H2*. As expected, the simple slope was most positive when passion for work is high while environmental dynamism is low. The simple slope is highly positive when both passion for work and environmental dynamism are high. These results highlight the configurational effect of passion for work on EO to improve firm performance. These results are also consistent with *H2*, that the impact of the interaction between EO and passion for on firm performance is bolstered when the business environment is dynamic.

In order to examine the direction of this moderation, the slopes for the four relevant cases (combining high/low passion for work and high/low environmental dynamism in Figure 2) were plotted to conduct a slope difference test by following the procedures advanced by Dawson and Richter (2006). The findings indicate that there are significant differences between the slopes of high passion for work/high environmental dynamism and low passion for work/high environmental dynamism ($p < 0.05$). However, there were no significant differences for non-dynamic environment ($p > 0.10$), supporting the notion that passion for work is important to the EO-performance relationship in dynamic environmental but not in more stable industry markets. Regarding the direction of passion's moderation of the EO-performance relationship in dynamic environments, the simple slope test conducted reveals that, in dynamic environments, the relationship between EO and firm performance is significantly positive when passion is high ($b = 0.36$, $t = 2.95$, $p < 0.01$). However, there is no significant relationship between EO and firm performance when passion is low ($b = -0.11$, $t = -0.62$, $p > 0.10$). The findings from the three-way interaction analysis support *H2*, that EO is related to firm performance when both passion and dynamic environments are high.

Indeed, it has been suggested that by focussing scholarly attention only on the positive effects of managers' passion, extant literature neglects the potential downside of such passion as well as the risks that propagate a skewed and inaccurate view of passion and its consequences (Ho and Pollack, 2014). In *post hoc*, this study estimated a quadratic term of passion (i.e. $EO \times \text{Passion-squared}$) and found that passion enhances EO to produce higher performance outcomes ($\beta = 0.57$, $p < 0.01$). In a three interaction ($EO \times \text{PW-squared} \times \text{PED}$), this study found a positive significant β -value ($\beta = 0.64$, $p < 0.01$) which suggest that high levels of managers' passion interact with EO to produce higher performance, more so in dynamic environments. This finding further suggests that linking managers' passion to positive outcomes in dynamic environments is not a problem.

5. Discussion and implications

Guided by the RBV, contingency theory and regulatory focus theory, the present study develops theoretical arguments regarding how personal characteristics like passion for work facilitate EO-firm performance relationship. It also introduces the degree of environmental dynamism in order to clarify the boundary conditions of passion for work's role in terms of the EO-firm performance relationship. In addressing this gap, this study's findings highlight several theoretical and practical implications. Empirical findings suggest that passion for work facilitates the association between EO and firm performance, especially in dynamic environment. These findings contribute to the EO literature and the entrepreneurial passion literature.

The study's contribution to the EO literature is the empirical validation of the theoretical argument that a firm's EO-performance relationship is moderated by passion for work. In line with the study's theoretical arguments, passion for work moderates the EO-performance relationship, particularly in dynamic environments. This study also takes the complementary perspective of RBV to study how a firm's resource (i.e. EO) interacts with individual characteristics (i.e. passion for work) to simultaneously impact firm performance. To make up for the limitation of RBV, this study further tested the impact of the three-way interaction of EO, passion for work, and environmental dynamism on firm performance.

The contributions of this study are twofold. First, the supported interaction effect of EO and passion for work on firm performance (*H1*) indicates that managers' passion for work can create a multiplicative effect with EO impacting firm performance. This finding fills the gap in our understanding of the role and impact of managers' passion for work thereby diminishing the likelihood that firms will risk misguided use of EO and managers' passion for work when the abovementioned interactions are overlooked. The implication is that, those managers who are more passionate about devoting substantial efforts to work-related activities can ensure smooth implementation of EO to enhance firm performance. Managers who are passionate about their work may perceive stronger feelings of self-accomplishment and joy when they can leverage their knowledge resources to support EO implementation. The present study supports previous research (e.g. De Clercq *et al.*, 2010) in confirming that EO in isolation cannot easily achieve a superior performance. Instead, the joint interaction of EO and individual managers' passion for work is likely to impact firms' performance.

Second, this study contributes to the existing management literature by considering the joint effect of environmental dynamism and passion for work on the relationship between EO and firm performance (*H2*). Indeed, previous scholarly studies have investigated the moderating role of environmental dynamism or uncertainty on the EO-performance relationship (e.g. Covin, 1991). Other scholars have also examined internal factors such as social exchange process (e.g. De Clercq *et al.*, 2010), strategic process (e.g. Covin *et al.*, 2006), and top management transformational leadership as positive moderators on EO-firm performance relationship (e.g. Engelen *et al.*, 2015). However, none of these earlier studies have considered the joint effect of passion for work and environmental dynamism on EO-firm performance relationship.

The findings from this study provide managers with a deeper understanding of how to achieve superior firm performance, especially when firms are entrepreneurially oriented. First, the results of this study show that passion for work can help firms to implement a strategic orientation to enhance their relationship with performance. More specifically, managers' passion for work enables a firm to implement an entrepreneurially oriented strategic posture more effectively and efficiently than it could if managers leading such firms had no such passion. This insight is particularly important for entrepreneurially oriented firms that operate in dynamic business environments which are commonly characterized by rapid change in customer needs or quick technological developments. The performance of entrepreneurially oriented firms increases significantly when managers leading such firms experience feelings of pleasantness and joy when engaging in intensive work-related activities (i.e. when they experience passion).

Second, the present study in the Ghanaian context has great implications for Ghanaian firms. It reminds managers that in order to enhance firm performance, firms must not only be entrepreneurially orientated, but managers leading such firms must

be passionate about their work-related activities. Thus, firms prioritizing EO can improve firm performance by adopting an approach to train managers to self-regulate their passion in ways that permit them to be positive toward EO implementation. As suggested by the regulatory focus theory (Higgins, 1997), individuals may not attach the same weight to potential opportunities as to the potential risks. This study suggests that it is important to develop a self-regulatory technique that may be beneficial to managers who are best able to regulate and direct their own passion. This reminds practitioners that in order to enhance firm performance, firms can develop a system of training that allows managers to regulate their passion to align with strategic orientations.

Third, managers need to recognize that passion for work alone may not always strengthen the EO-firm performance relationship. The current empirical findings suggest that the benefits of aligning EO with managers' passion for work depend on the rapidly changing external market environment (i.e. environmental dynamism). The findings from this study suggest that in dynamic environments, the positively moderating effect of managers' passion for work is more pronounced. Therefore, when the environment changes more quickly, managers' passion for work can greatly bolster the EO-firm performance linkage (Figure 3).

6. Conclusion, limitations and future research

The present study has several limitations that offer avenues for future research. First, this study employed subjective measures of firm performance. The use of self-reported and perceptual measures of firm performance has the potential to introduce respondent bias to the sample. Although prior research has suggested that subjective measures of firm performance are correlated with objective measures with a high degree of reliability (e.g. Dess and Robinson 1984), it is possible that there are gaps between subjective measures and the financial information released by firms. This study suggests that future research should employ objective measures to assess firm performance.

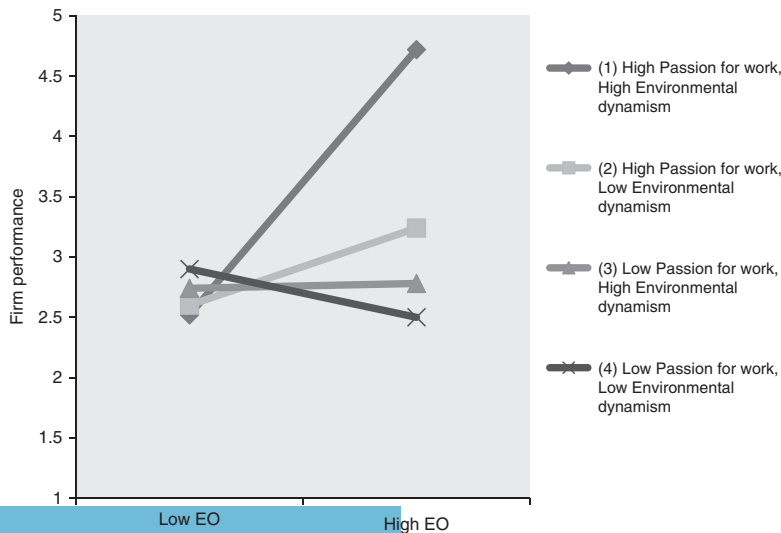


Figure 3. Interaction effect of EO with passion for work and environmental dynamism on firm performance

Second, because the study used cross-sectional sample, it did not allow causal claims to be made. Especially because this study focusses on firm performance, a major avenue for future research should be the exclusion of a potential endogeneity bias in this relationship (Hamilton and Nickerson, 2003) by using longitudinal data.

Third, despite the fact that the unique institutional environment in sub-Saharan Africa may limit the generalizability of our conclusions concerning institutional effects, Ghana is still one of the emerging economies and perhaps has the potential to tap into the current global business and entrepreneurial ideas. However, cultural factors may interfere with the arguments this study applies. Future research could generalize this study's findings in the context of other cultural and institutional settings, and especially other emerging economies (Bruton and Lau, 2008).

In conclusion, the present study sought to enhance our understanding of how EO, passion for work and environmental dynamism influence firms' performance in general. Specifically, this study found that the influence of EO on firm performance is moderated by passion for work. Therefore, the present study does not only theoretically highlighted the important influence of passion for work on firm performance, but also provided supporting empirical evidence, thereby advancing our understanding of EO and its implications for firms performance. The study also found that the joint effect of EO and passion for work on firm performance is further moderated by environmental dynamism. These findings provide insights regarding how firms should balance their EO and managers' passion for work in constantly changing market environments.

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