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Link to Publisher's version: <http://dx.doi.org/10.1108/IJEER-12-2015-0320>

Citation: Adomako S, Narteh B, Danquah KJ, Analoui F (2016) Entrepreneurial orientation in dynamic environments: the moderating role of extra-organizational advice. *International Journal of Entrepreneurial Behaviour and Research*, 22 (5): 616 - 642.

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Emerald

International Journal
of Entrepreneurial
Behaviour & Research

Entrepreneurial orientation in dynamic environments: the moderating role of extra-organizational advice

Journal:	<i>International Journal of Entrepreneurial Behavior & Research</i>
Manuscript ID	IJEBR-12-2015-0320.R2
Manuscript Type:	Research Paper
Keywords:	Entrepreneurial orientation, Extra-organizational advice, SMEs, Firm Performance, Developing economy, Ghana

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Entrepreneurial orientation in dynamic environments: The moderating role of extra-organizational advice

Abstract

Purpose- Research on entrepreneurial orientation (EO) has concluded a positive link between EO and firm performance and that relationship depends on several contingencies. The paper derives insights from the absorptive capacity and contingency perspectives to introduce extra-organizational advice as a moderator of the relationship between EO and firm performance in a dynamic environment.

Design/methodology/approach- Using survey data from 340 small and medium-sized enterprises (SMEs) in Ghana, the study examines the moderating influence of extra-organizational advice on the EO-firm performance relationship in dynamic environments.

Findings- The study's empirical findings suggest that extra-organizational advice amplifies the EO-performance relationship in dynamic 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. Limitations aside, the study helps to answer how extra-organizational advice translates EO into improved performance in an environment characterised by constant flux.

Practical implications- The results of this paper can assist entrepreneurs and policy-makers in understanding the dynamics and processes involved in implementing a strategic orientation to achieve higher performance. For SME managers, firm performance is determined by high levels of EO and extra-organizational advice in dynamic environments. The understanding of this issue can promote the development and maintenance of entrepreneurial ventures.

Originality/value- The paper examines an important, but under-researched issue-the moderating effect of extra-organizational advice on the EO-performance relationship in dynamic environments. To the best of the authors' knowledge, the present study pioneers research in this area.

Introduction

Entrepreneurial orientation (EO) research has blossomed over the years (e.g., Kropp, Lindsay, and Shoham, 2008; Rauch, et al., 2009; Soinen, et al., 2013). EO is a strategic posture that reflects the specific processes, practices, and behaviors that allow a firm to act in an entrepreneurial way (Covin and Slevin, 1991; Lumpkin and Dess, 1996). A major conclusion is that firms with strong EO outperform other firms and the strength of EO's effect on performance depends on various contingencies (Lyon et al., 2000; Rauch et al., 2009), including external conditions (e.g., Zahra and Covin, 1995) and internal variables (e.g., Covin et al., 2006).

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3 Prior studies have investigated how EO can be aligned with factors outside the borders of a
4 firm to obtain superior performance (e.g., Tan and Tan, 2005; Stam and Elfring, 2008; Lee,
5 Lee, and Pennings, 2001; Wiklund, 1999; Zahra and Covin, 1995), and the assessment of
6 moderators of the EO-firm performance linkage (e.g., Covin and Slevin, 1988; Lumpkin and
7 Dess, 2001; Yusuf, 2002; Kraus et al., 2012; Boso et al., 2013; Wales et al., 2013; Su, et al.,
8 2015). However, limited research has focused on extra-organizational advice (i.e. delivered
9 by private sector consultants and professional organizations, normally for payment, or
10 government sponsored business support agencies) as a conduit for boosting the effect of EO
11 on firm performance. From a resource-based theory perspective (e.g., Barney, 1991), scholars
12 have argued that information/knowledge gaps are particularly evident in SMEs because of
13 their resource and skills deficiencies (Johnson et al., 2007; Mole, Baldock and North, 2013).
14 This enhances firms' absorptive capacity; its ability to identify, assimilate, and exploit
15 knowledge from the environment (Cohen and Levinthal, 1989). Absorptive capacity refers to
16 "an ability to recognize the value of new information, assimilate it, and apply it to
17 commercial ends" (Cohen and Levinthal, 1990; p. 128). The EO literature recognizes
18 absorptive capacity as a dynamic capability since a major obstacle in effectively and
19 efficiently implementing entrepreneurial activities is the handling of uncertain situations in
20 which typically established knowledge and information are missing (Engelen et al., 2014;
21 Lumpkin and Dess, 1996).

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When a firm enhances its absorptive capacity, it enables the firm to the ability to imitate other
firms' products or processes and also bolsters the ability to exploit less commercially focused
knowledge, such as scientific research (Lane et al., 2006). As such it has been argued that
developing and maintaining absorptive capacity is critical to a firm's long-term survival and
success because absorptive capacity can reinforce, complement, or refocus the firm's
knowledge base (Cohen and Levinthal, 1989; Lane et al., 2006). Lane et al (2006) have this
to say: "the capability to disseminate and apply acquired knowledge explained far more
variance in firm performance than did the amount of external knowledge acquired". Yet, a
contingency model utilizing extra-organizational advice is missing from the EO literature.
The current research fills this gap in the EO literature.

This study conceptualizes extra-organizational advice-seeking as a problem solving behavior
in which a decision-maker searches for knowledge outside the borders of the firm to help
manage the uncertainty in the environment (Hayden et al., 2013; Yaniv, 2004). Recent work

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3 in Ghana suggests that SME managers in developing countries do not take advice due to low
4 level of education, a lack of awareness about the existence of support services (Obeng and
5 Blundel, 2015).
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9 Earlier studies have indicated that external sources of advice combine the firm's capabilities
10 in such a way that they build on each other to influence "the firm's ability to create and
11 deploy the knowledge necessary to build other organizational capabilities (e.g., marketing,
12 distribution, and production)" (Zahra and George, 2002; p. 188). For example, in many
13 developing economies, knowledge from external sources provides decisions-makers with
14 assessments of best practices, market knowledge, and specialized expert analysis (e.g., Obeng
15 and Blundel, 2015). Specifically, developing economies experience massive information
16 asymmetry due to high institutional and infrastructural underdevelopment (Boso et al., 2013)
17 and this has presented substantial challenges for SMEs to leverage their capabilities for
18 growth (Li et al., 2008). This has inevitably shaped the managerial assumptions and the
19 decision-making processes of many firms, including decisions regarding how to pursue
20 entrepreneurial opportunities (Webb et al., 2011).
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30 Extra-organizational advice has been suggested as a conduit for shaping managerial
31 assumptions and decision-making processes of many firms in emerging economies by filling
32 the institutional voids created the underdeveloped markets (Obeng and Blundel, 2015). In
33 particular, the formal institutions supporting free markets in developing economies are weak
34 and still evolving (Wright et al., 2005). In such a context, extra organizational advice is seen
35 as filling the institutional void and facilitate the implementation of entrepreneurial-oriented
36 behaviors (Obeng and Blundel, 2015; Robson, Wijbenga, and Parker, 2009). Yet, scholarly
37 literature is unclear about the role of extra-organizational advice in enhancing the influence
38 of EO on performance. However, the literature indicates that the beneficial effects of firms'
39 EO may be context specific in developing economies (e.g., Luo et al., 2008; Stam and
40 Elfring, 2008). Hence, it is argued that the facilitating role of extra-organizational advice on
41 the EO-performance relationship should be strongest in dynamic markets based on the
42 assumption that entre-organizational advice encompasses a component that deals with the
43 identification and generation of useful external knowledge and information combined with
44 existing knowledge, and implemented in new products, new technological approaches
45 (Escribano et al., 2009; Robson, Wijbenga, and Parker, 2009).
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3 Dynamic environment refers to the perceived degree of change and diversity in customers'
4 needs and preferences and are associated with increasing variations in customers' buying
5 behavior and diversity in product requirements (Miller and Friesen, 1982a). In these
6 environments, the generation of new information and knowledge appears particularly
7 important for SMEs. A major question arising from this gap is: how does extra-organizational
8 advice influence the performance benefits of a strong EO in SMEs operating in dynamic
9 environments?
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16 This study aims to make two principal contributions to the EO and broader entrepreneurship
17 literatures. First, as a major theoretical contribution, this study advances research on the EO-
18 performance relationship by integrating extra-organizational advice as a moderating variable
19 (Rauch et al., 2009). Advisers can diffuse new methods, knowledge and best practice to SME
20 managers (Bryson and Daniels, 1998) which can boost the beneficial effect of EO on firm
21 performance. This is because existing literature characterizes extra-organizational advice as a
22 resource available for the business manager (e.g., Chrisman and McMullan, 2004; Robson
23 and Bennett, 2000b, 2010). Second, this study contributes to the literature of business advice
24 (e.g., Mole, et al., 2009; Mole, et al., 2011) by building empirical ties between extra-
25 organizational advice, EO and performance in dynamic environments. Specifically, this study
26 examines the degree to which environmental dynamism strengthens extra-organizational
27 advice's effect on EO-performance relationship. A major rationale is that, due to the
28 increasing dynamic nature of emerging markets and the pace of technological change, SMEs
29 have increasingly turned to external sources for advice in order to make stepped changes
30 needed to respond to pressures and take full advantage of new market opportunities available
31 to them (e.g., Fincham, 1999). Thus, environmental dynamism has been added as an
32 important boundary condition to the extra-organizational advice literature.
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45 In the section that follows, the theoretical background and research hypotheses are presented.
46 Next, the methods utilized to test the model are explained, and the findings of the study are
47 presented. Following the discussion of the results, some directions for future research have
48 been recommended.
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52 53 54 **Theory and Hypotheses**

55 In this study, the focus is placed on the boundary conditions of the EO-performance
56 relationship because scholarly studies offer empirical support for the positive link between
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EO and firm performance (Rauch, et al., 2009). Therefore, no direct-effect hypothesis is offered. The present study contends that the facilitating role of extra-organizational advice on the EO-performance relationship should be strongest in dynamic environments relying on the assumption that when the environment is in a state of flux, it would cause prime decision makers to mimic the behaviour of other organizations in their environment through the adaptation best practices, comparable market positions, and similar technologies (DiMaggio and Powell, 1983; Greve, 1998). Thus, the present study suggests that the opportunities offered by the changing environment provide the setting for the firm seek external advice to exploit new market niches and new geographic markets ahead of competitor.

In addressing this research model, two main theoretical perspectives are drawn in order to introduce extra-organizational advice as a moderator of the EO-performance relationship in dynamic environments. First, absorptive capacity perspective (Cohen and Levinthal, 1989) suggests that absorptive capacity, it helps a firm's long-term survival and success because absorptive capacity can reinforce, complement, or refocus the firm's knowledge base (Lane et al., 2006). These three dimensions encompass not only the ability to imitate other firms' products or processes but also the ability to exploit less commercially focused knowledge, such as scientific research. The "strategic fit" paradigm from strategic management indicates that, for each strategic posture (e.g., EO), there is a set of firm-level resources and capabilities that enhance the performance effects of the strategic posture (e.g., Song et al., 2007). In particular, extra-organizational advice can facilitate the performance effects of EO. This can be achieved by helping firms overcome information and knowledge gaps (Chrisman and McMullan, 2004).

The rationale for using absorptive capacity perspective is that because our paper draws from surveys at the level of the SME business, it is most appropriate to focus on the decision making and expertise within the firm itself. At this level the absorptive capacity perspective of the firm is the main theoretical approach available. Using external business advice, strategic and information skills can be developed (Bennett and Robson, 2003). Firms typically seek external advice that is not proprietary to the focal firm, its members or its internal relations (Menon and Pfeffer, 2003). The present study argues that in order to implement entrepreneurial activities smoothly, extra-organizational advice is necessary because it is a predominant mode of knowledge acquisition for managers in strategy implementation (e.g., Mintzberg, 1973; Heavey, et al., 2009a).

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4 Second, drawing from contingency theory (Venkatraman and Prescott, 1990; Ginsberg and
5 Venkatraman, 1985), we argue that strategic decisions are prone to certain contingencies not
6 entirely understood in decision making (e.g., Tichy and Bennis, 2007), yet decisions that rely
7 on multiple perspectives can decrease differences between choices made and outcomes
8 desired (Forbes, 2007). Several contingency scholars contend that firm performance is a
9 function of the agreement between a firm and its external environment, strategy and structure
10 (e.g., Duncan, 1972; Miles and Snow, 1978; Fredericks, 2004). The present study argues that
11 the opportunities afforded by the changing environment provide the setting for the firm to be
12 first and to exploit new market niches and new geographic markets ahead of competitors. To
13 respond to the pressures and take full advantage of new market opportunities available to
14 them, SMEs' managers are increasingly turning to specialist advice (Fincham, 1999). As a
15 result, managers tend to scan the environment for information from external organizational
16 sources for important insights about their decisions (Garg et al., 2003; Mueller et al., 2007).
17 Therefore, we draw on fundamental premise in contingency theory to argue that when the
18 environment is in the state of flux, the benefit the firm obtains from extra-organization in
19 implementing EO is greater. We capture this reasoning in our proposed conceptual model in
20 Figure 1. AS shown in Figure 1, firm performance is influenced by EO. Additionally, the
21 present study contends that the level of extra-organizational advice boosts the effect EO on
22 firm performance in dynamic environments. The section that follows next explains the
23 theoretical underpinnings of the present study.
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INSERT FIGURE 1 HERE

Moderating Effect of Extra-organizational Advice

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45 With regards to the contingent role extra-organizational advice on the EO-firm performance
46 relationship, existing literature suggests that firms that seek external advice are able to
47 overcome information and knowledge gaps and exhibit high levels of entrepreneurial
48 behaviors (Chrisman and McMullan, 2004). From a resource-based theory perspective
49 (Barney, 1991), it has been suggested that these information/knowledge gaps are particularly
50 evident in the small and young firms because these firms face resource and skills constraints
51 (Johnson et al., 2007). As such, engaging with extra-organizational sources allows for
52 identification of unfamiliar or previously unrecognized information due to knowledge and
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3 skills constraints (Cohen and Levinthal, 1990). Overall, it is concluded that the ability to
4 acquire new knowledge and information, through advice from external sources, facilitates the
5 successful conversion of EO into improved firm performance. Thus, the following hypothesis
6 is stated:
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10 **H₁**: *Extra-organizational advice positively moderates the relationship between EO and firm*
11 *performance.*
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13 14 ***Extra-organizational Advice and Perceived Environmental Dynamism***

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16 Recent work suggests that network ties moderate the relationship between EO and
17 performance in Ghana (e.g., Boso et al., 2013). While SME managers seek advice from
18 networks, our study is not concerned with this type of advice. We are concerned with advice
19 received from consultants/government agencies (Obeng and Blundel, 2015). The literature on
20 extra-organizational advice argues that when CEOs perceive the environment to be in
21 constant flux, they tend to dwell on external sources of advice to keep to the latest
22 developments in the industry (e.g., Heyden, et al., 2013). Moreover, extra-organizational
23 advice is likely to be even more valuable in dynamic market environments than in other
24 environments because extra-organizational advice allows the firm to deal with the uncertainty
25 in these environments. Firms obtain inputs to make sense of, and cope with, forces that are
26 beyond the direct control of the firm (Heyden, et al., 2013). Based on these insights, the
27 arguments concerning how environmental dynamism is related to extra-organizational
28 advice's moderation on the EO-performance linkage are developed. A major insight is to
29 pose that extra-organizational advice is crucial in leveraging EO's full potential since extra-
30 organizational advice can assist managers in judging what strategic action should be
31 undertaken (Dutton and Jackson, 1987; Sharma, 2000). This ability is particularly prevalent
32 when the environment is in a state of flux than when it is static. In dynamic environments,
33 extra-organizational advice fills knowledge or gaps regarding interpretations on practices and
34 comparable market positions (Greve, 1998). Similarly, extra-organizational advice provides
35 information on identified new blind spots that may otherwise remain unidentified by the
36 firm's managers when the environment is in a state of flux (Ansoff, 1975).
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53 In addition, if the environment is entirely unpredictable it suggests that opportunities also
54 emerge regularly to which entrepreneurial firms must react swiftly (Helfat et al., 2007). This
55 might be especially difficult to spot when the environment is in a state of flux (Haleblian and
56 Fininkelstein, 1993). Accordingly, as environments become more dynamic CEOs/top
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3 managers can be expected to seek advice from external sources to improve their assessment
4 and understanding of new opportunities and threats confronting the firm. It is further
5 contended that if the environment is entirely predictable and static, it impose less challenging
6 and complex conditions on firms such that they can be successful with less extra-
7 organizational advice. However, there are fewer opportunities for the firm to be proactive.
8 This argument is summarized as follow:
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14 **H₂:** *The moderation of extra-organizational advice on the relationship between EO and*
15 *performance is stronger when environmental dynamism is high than when it is low.*
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18 19 **Method**

20 21 ***Study setting***

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23 The present study focused on Ghana to validate the research model for the following reason.
24 First, despite Ghana's achievement with respect to success of its economic transformation
25 policies (Leechor, 1994; Acquah, 2007) and its enactment of market friendly policies
26 (Chironga et al., 2011; Boso, et al., 2013), recent scholarly studies suggest that extra-
27 organization intervention in the form of external business advice may help firms to
28 implement firm -level entrepreneurial behavior, yet taking advice by SMEs in Ghana is at its
29 lowest levels (Obeng and Blundel, 2015). External assistance can assist firms overcome
30 information and knowledge gaps (Chrisman and McMullan, 2004). Second, Ghana has been
31 characterized by inadequate market supporting institutions and weak enforcement capacity of
32 regulatory and legal institutions. This creates a greater level of uncertainty in the business
33 environment. In exploring extra-organizational advice as a contingency variable, scholars
34 have suggested that the greater the uncertainty in the firm's business environment, the more
35 likely the firm will rely on extra-organizational advice (e.g., DiMaggio and Powell, 1983;
36 Heyden et al., 2013). Advice from external sources thus serves as a conduit for signalling
37 early warning system regarding the nature and direction of changes in the environment
38 (Ansoff, 1980). This can help managers in uncertain business environment to examine the
39 strategic action that must be taken (Sharma, 2000). In such contexts when facing high
40 uncertainty as is characteristic of emerging economies the ability to change to introduce new
41 products, implied by entrepreneurial orientation would be at a premium (Hoskisson et al.,
42 2013). Therefore, Ghana is a useful case to examine how external advice taking helps firms
43 operating in dynamic environments to effectively implement firm-level entrepreneurial
44 behavior.
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Sample and data

The present study defines a small to medium-sized enterprise as a firm with less than 250 employees and below US\$10 million annual sales. The definitional criteria of a SME in Ghana stems from a 2006 national survey of Ghanaian businesses conducted by the Ghana Statistical Service (2006). In addition, we ensured that the sample comprised only firms that had a minimum of five years of business operation (Morgan et al., 2012), and firms that had complete contact information on the chief executive officer (CEO) or top management (Khavul et al., 2010). A sample of 950 such firms was randomly selected from a database held by the Ghana's Company Register Database (available at Registrar General's Department) (Acquaah, 2007). This database contained 13,780 SMEs. This study collected data through the on-site administration of a questionnaire. In May 2013, 950 questionnaires were sent out to potential respondents. A letter sent to CEOs/top managers requested that the chief executive or another member of the top management team complete the questionnaire. Usable responses were received from 340 firms yielding 35.8% response rate. Analysis of respondents' profiles revealed that 70% of the survey was completed by the chief executive and the remaining were completed either by another member of the top management team (approximately 25%) or by a direct report to the management team (5%). Therefore, the study's survey questionnaires were completed by senior managers.

Non-response bias was tested by the extrapolation technique, equating late responses to non-respondents (Armstrong and Overton, 1977). Responses were split into two groups and the two groups were compared in terms of the mean responses on each variable, as well as firm size and sales level, using a t-test. No significant differences between the two groups were found at $p < 0.05$, leading us to conclude that respondents were not different from non-respondents. The present study obtained information from the following specific industries: agro-processing=24%; wholesale and retail businesses =22%; financial services =20%; mining and quarrying operators = 19%; transportation services =8%; and others =7%. We created an industry dummy with 1 = manufacturing, and 2 = services (Wang, 2008) and categorized agro-processing and mining and quarry as "manufacturing industry" and wholesaling and retailing, transportation and financial service as "services industry".

Measure of Constructs

The core constructs were measured using established multi-item scales in the literature. Table 2 provides an overview of the variables, the corresponding set of items measured on a seven-

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3 point Likert-type scale, their means and standard deviations, standardized factor loadings,
4 Cronbach's alpha, and average extracted variance.
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8 **Entrepreneurial orientation.** EO was measured using a nine-item scale developed by Miller
9 (1983) and Covin and Slevin (1989). This EO measure is well established in the literature
10 (Rauch et al., 2009). The scale measures three dimensions of EO: innovativeness, risk taking,
11 and proactiveness. Each item was measured using a seven-point scale ranging from '1-
12 strongly disagree' to '7-strongly agree.' As with all multi-item scales in the study, the
13 combined mean of the scale measures constitutes the variable score. The reliability of the EO
14 ($\alpha=.90$) was well above the recommended threshold.
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20 **Extra-organizational advice.** Extra-organizational advice was operationalized using two
21 items asking about the respondent's extent to which knowledge inputs about current strategy
22 and future strategy from external sources were sought, based on Alexiev et al.'s (2010)
23 seven-point scale, as adapted from McDonald and Westphal (2003). This study focused on
24 knowledge sought from sources outside the organization (top management external advice).
25 A sample statement was "to what extent did you acquire knowledge delivered by private
26 sector consultants and professional organisations, normally for payment, or government
27 sponsored business support agencies about your future strategy?" Each item was measured
28 on a seven-point rating scale: 1 = not at all; and 7 = to a large extent. The reliability of extra-
29 organizational advice ($\alpha=.88$) was well above the recommended threshold (Hair et al., 2006).
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38 **Perceived environmental dynamism.** Four items were taken from Jansen et al., (2006) to
39 measured perceived environmental dynamism construct. A sample statement was "Changes
40 in our market environment are very intense". The Cronbach's alpha value of the scale was
41 .82, indicating high reliability (Hair et al., 2006).
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46 **Firm performance.** Firm performance was measured with six items taken from Greenley and
47 Foxall (1997). The respondents were asked to compare their firms with their main
48 competitors in the last three years, and to respond on a seven-point Likert-scale with anchors
49 ranging from 1=much worse than competitors; and 7=much better than competitors. These
50 six items covered financial and market performance (e.g., Park and Luo, 2001). The
51 combined mean of the scale measures constitute the variable score. Cronbach Alpha's value
52 for the combined mean was $\alpha=.87$, indicating high reliability (Hair et al., 2006). The use of
53 subjective performance measures allowed us to avoid the problems associated with objective
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performance measures in emerging economies such as non-standardized financial reporting, failure in the enforcement of financial reporting legislation, inflation and devaluation of local currency (Ghanaian Cedi) (Hoskisson et al., 2000; Luk et al., 2008).

Control variables. Control variables were used to account for potential influences that might drive the dependent variables from different levels. We included CEO/manager as years as CEO/manager has been at the company as a CEO/manager. CEO/manager advanced degree was tapped if the CEO/manager had a master's, multiple masters, or PhD (Hambrick and Mason, 1984). 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, Zhou and Li, 2011). Market scope is a dummy variable that captures the extent to which a firm is local or regionally focused 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 measured following Vorhies and Morgan (2005). We included market orientation as control variable because 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).

INSERT TABLE 1 HERE

Reliability and validity assessment

The study follows existing scholarly development (e.g., Anderson and Gerbing, 1988) and used a two-stage approach to examine the validity of the study's main constructs as presented in Table 1. First, exploratory factor analysis (EFA) was performed on all the study's items and the potential threat of common method variance using the Harman one-factor test was checked (Podsakoff and Organ, 1986). A factor analysis of the items on the performance variable, environmental dynamism and the extra-organizational advice variables yielded nine factors with eigenvalues greater than one and the first factor accounting for about 30.24% of the variance in the unrotated solution. Thus, common method variance is not a serious concern in this study.

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3 Additionally, three competing models to examine whether common method bias was a
4 problem or not in our data was estimated (Cote and Buckley, 1987; Williams, Cote and
5 Buckley, 1989). Table 2 presents common method bias nested models.
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11 ***INSERT TABLE 2 HERE***

12 In Model 1, the trait-only model in which all indicators were loaded on a single latent factor
13 was estimated. Model 2 was a method-only model in which each indicator was loaded on its
14 respective latent factor. Finally, Model 3 was a method and trait model involving inclusion of
15 a common factor linking all the indicators in Model 2. Comparison of the three models
16 indicates that Model 2 and Model 3 are superior to Model 1, and that Model 3 is not
17 substantially better than Model 2. Conclusively, it is assumed that the variance in the
18 managers' responses can be explained by the simultaneous effect of traits, method, and
19 random error. This shows that common method bias does not sufficiently describe the study's
20 data; hence it is concluded that common method bias is not a major concern in the study
21 (Boso, et al., 2013).
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30 Second, using LISREL 8.54 with the maximum likelihood estimation procedure,
31 confirmatory factor analysis (CFA) all the study's multi-item constructs was performed. In
32 order to avoid the risk of violating minimum sample size to parameter ratios, conventional
33 practice was followed (e.g., Cadogan et al., 2006) to analyze the scales initially in subsets;
34 thus, scales that were conceptually related were analyzed together (Baker and Sinkula, 1999).
35 Each item was allowed to only load on one construct for which it was an indicator. Item
36 loadings were as hypothesised and were significant at $p < 0.01$.
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42 Three components of EO (i.e. innovativeness, and risk-taking, proactiveness), the items that
43 measured extra-organizational advice, the market orientation scale, the firm performance
44 scales and simultaneous analysis of all the scales were assessed. Table 1 displays the list of
45 items, their sources, their respective standardized factor loadings and t-values, and results of
46 reliability and validity tests. The positive and significant loadings confirm convergent validity
47 of the study's measures. Moreover, since the standardized "loadings" of all the measurement
48 items on their respective constructs were significant ($p < .05$) and none of the confidence
49 intervals of the phi values contained a value of one, it was concluded that the constructs
50 exhibited convergent and discriminant validity (Montoya-Weiss, Massey and Song, 2001).
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3 In order to test the measures for discriminant validity the square-roots of AVE were
4 calculated for all multi-item constructs (Table 3). The results show that, for all constructs,
5 each correlation of one construct with another is smaller than the square-root of its AVE,
6 suggesting discriminant validity for these measures (Fornell and Larcker, 1981). For this
7 reason, it is suggested that the measured concepts differ significantly from each other
8 (Bagozzi and Phillips, 1982). Moreover, the construct reliability was assessed by calculating
9 Cronbach's alpha coefficients for each of the multi-item constructs. All the scales were above
10 the suggested value of .70. Thus, it is concluded that the measures utilized in the study were
11 valid and internally consistent.
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19 Further, a "full measurement model" is estimated in which all items were entered
20 simultaneously in a CFA model with a predicted measurement model imposed (Cadogan et
21 al., 2006). The CFA fit indices exceeded the levels suggested by Bentler and Bonnett (1980).
22 All factor loadings were positive and significant with good fit indices (Bagozzi and Yi,
23 2012). Although the normed chi-square value ($\chi^2/DF = 1648.42/1387 = 1.18$) is significant
24 ($p < .01$), all the other fit indices were within acceptable cut-off ranges. Specifically, root
25 mean square error of approximation (RMSEA) = .04; standardized root mean square residual
26 (SRMR) = .05; non-normed fit index (NNFI) = .94; and comparative fit index (CFI) = .93 were
27 all satisfactory.
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36 Results

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38 Table 1 contains the descriptive and validity tests. The correlations for the study variables
39 appear in Table 3. Moderated hierarchical regression analysis is used to test the hypotheses
40 (Cohen and Cohen, 1983). To attenuate the threat of multicollinearity, the independent and
41 moderating variables were mean-centered before the interaction terms were created (Aiken
42 and West, 1991). The variance inflation factors were all lower than the critical value of 10,
43 suggesting that multi-collinearity is not a concern in our data (Neter et al., 1996). In Table 4,
44 the regression results are provided for several models. Model 1 contains only the control
45 variables; Model 2 adds the direct effect of EO, extra-organizational advice, and perceived
46 environmental dynamism. Models 3 to 4 add the two corresponding interaction terms one at a
47 time, in order to avoid the masking of true interaction effects (Cohen and Cohen, 1983; Aiken
48 and West, 1991). This approach has suggested in prior entrepreneurship studies that test
49 multiple interactions (e.g., De Clercq et al., 2011).
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3 From Model 1 we noted a negative relationship between age, market scope, industry type and
4 firm performance, in line with previous research (e.g., Andreson and Eshima, 2013; Boso et
5 al., 2013). Firm size, market orientation, CEO/manager tenure and CEO/manager advanced
6 degree were associated with greater performance, suggesting that these variables can
7 influence the research model. Although not directly hypothesized, Model 2 indicated that
8 each of the direct effects variables contributed to increased firm performance, as reflected in
9 the positive coefficients for EO ($\beta=19, p < .01$), extra-organizational advice ($\beta= .17, p < .01$),
10 and perceived environmental dynamism ($\beta= .21, p < .01$). The positive relationship between
11 EO and firm performance is in line with prior research contending that EO positively relates
12 to firm (Rauch et al., 2009).

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20 In Hypothesis 1, a positive moderating effect of extra-organizational advice on the
21 relationship between EO and firm performance was predicted. Model 3 findings confirmed
22 this hypothesis, according to the significant regression coefficient for the interaction ($\beta= .42,$
23 $p < .01$). A simple slope test was also conducted, following Aiken and West (1991), and it
24 was found that the relationship between EO and firm performance is positive when extra-
25 organizational advice seeking is high. The results of the simple slope test support the study's
26 regression results and confirm hypothesis H₁, that EO is associated with firm performance
27 when extra-organizational advice is high. The graph of this interaction (Figure 1), shows that
28 the relationship between EO and the performance is more positive for those with high, as
29 opposed to low, extra-organizational advice.

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38 ***INSERT TABLE 4 HERE***
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42 Model 4 tests H₂, which predicted that perceived environmental dynamism moderates the
43 moderation of extra-organizational advice on the EO-performance relationship. To test a
44 three-way interaction term, the mean-centred EO, extra-organizational advice, and
45 environmental dynamism scores were multiplied for each firm, showing that the three-
46 way interaction is significant ($\beta=.57, p < .01$) and suggesting that the moderation of extra-
47 organizational advice on the EO-performance relationship is generally affected by a dynamic
48 environment (Dawson and Richter, 2006). Therefore, hypothesis 2 was also supported. The
49 results indicate that EO and extra-organizational advice are jointly reinforcing and
50 complementary in terms of their influences on firm performance and that this relationship is
51 amplified in dynamic environments.

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4 In a post-hoc analysis, the differences in the regression slopes in four extra-organizational
5 advice and environmental dynamism configurations were computed and tested following
6 Aiken and West (1991), and found that the relationship between EO and firm performance is
7 positive and significant when extra-organizational advice is high ($b=.18$, $t = 3.39$, $p < .01$),
8 whereas there is no significant effect of EO on firm performance when extra-organizational
9 advice is low ($b =.05$, $t = .41$, $p > .10$). The results of the simple slope test support our
10 regression results and confirm hypothesis H₁, that EO is associated with firm performance
11 when extra-organizational advice is high. The same procedure was followed to conduct
12 simple slope tests for high levels of environmental dynamism ($b =.22$, $t = 3.73$, $p < .01$) and
13 high levels of extra-organizational advice ($b =.02$, $t = .48$, $p > .10$). We also found that the
14 relationship between EO and firm performance is more positive at high levels of extra-
15 organizational advice and high levels of environmental dynamism ($b =.23$, $t = 3.98$, $p < .01$),
16 whereas there is no significant impact of EO on performance when both extra-organizational
17 and environmental dynamism are low ($b = .03$, $t = .41$, $p > .10$). The results of these tests
18 confirm hypothesis 2. In order to investigate the direction of this moderation, the slopes for
19 the four relevant cases (combining high/low extra-organizational advice and high/low
20 environmental dynamism) are plotted (see Figure 3) and the resulting plots are examined by
21 conducting a slope difference test, following procedures advanced in previous studies (e.g.,
22 Dawson and Richter, 2006). Figure 3 depicts the pattern of moderated results related to
23 hypothesis 2. As expected, the simple slope is highly positive when both extra-organizational
24 advice and environmental dynamism are high. These results highlight the configuration
25 influence of extra-organizational advice on EO to enhance firm performance in dynamic
26 environments. Overall, these findings from the three-way interaction analysis support H₂, that
27 EO is highly related to firm performance only when both extra-organizational advice and
28 dynamic environment are high.

47 Discussion

48 Utilizing the absorptive capacity and contingency perspectives, the present study seeks to
49 examine how extra-organizational advice enhances the EO-performance relationship and, of
50 particular relevance for firms operating in a developing economy context, whether those
51 potential benefits are enhanced for businesses operating in dynamic environments. Thus, this
52 study introduces the degree of environmental dynamism in order to clarify the boundary
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3 conditions of extra-organizational advice's role in terms of the EO-performance relationship.
4 Accordingly, the moderating effect of extra-organizational advice on performance in dynamic
5 environments is modelled. Thus, this paper extends knowledge on conditions in which EO is
6 more or less prevalent in enhancing firm performance in dynamic environments. The study's
7 contribution to the EO literature is the empirical validation of the theoretical argument that
8 EO-performance relationship is moderated by extra-organizational advice in a dynamic
9 environment. The study helps to answer how extra-organizational advice translates EO into
10 improved performance in an environment characterised by constant flux. A better
11 understanding of the conditions in which EO strongly relates to performance will be useful
12 for both practitioners and researchers.
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25 This study's findings regarding these moderating effects are as hypothesized. First, this study
26 argued that extra-organizational advice enhances the relationship between EO and firm
27 performance. As hypothesized, firms scoring high on EO are more likely to achieve enhanced
28 performance at high levels of cognitive extra-organizational advice. Extant research is more
29 consistent in showing that the strength of the EO-performance linkage depends on various
30 contingencies (Lyon et al., 2000; Rauch, et al., 2009). A major contribution this paper makes
31 to the EO literature is empirically validation of the theoretical argument that a firm's EO-
32 performance relationship is moderated by extra-organizational advice.
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43 Second, this study hypothesized that the moderation of extra-organizational advice on the
44 relationship between EO and performance is stronger when environmental dynamism is high
45 than when it is low. In line with the study's argument, extra-organizational advice moderates
46 the EO-performance relationship, particularly in dynamic environments. Therefore
47 integrating dynamic environment in a three-way interaction led to more nuanced findings.
48 Extant EO literature suggests that implementing an entrepreneurial strategic posture
49 effectively be a complex task (Covin and Slevin, 1991; Stam and Elfring, 2008) since these
50 firms face many uncertainties (Engelen et al., 2014). The present research suggests that this
51 complex relationship can be captured more accurately by examining more than one
52 moderator at a time.
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Conclusions

This study set out to empirically examine the relationship between EO and firm performance and the moderating influence of extra-organizational advice on this relationship in a dynamic environment. This theoretically derived research model which links EO, extra-organizational advice, perceived environmental dynamism and firm performance was empirically tested by means of an empirical study of 340 SMEs in a developing country. The findings from this paper are that extra-organizational advice amplifies the EO-performance relationship in dynamic environments. The findings have implications for theory and practice.

First, the study's theoretical contribution to the EO literature is the empirical validation of the theoretical argument that a firm's EO-performance relationship is moderated by extra-organizational advice. Consistent with the theoretical arguments, extra-organizational advice moderates the EO-performance linkage, particularly in dynamic environments. Existing research suggests that knowledge from external sources typically provides decisions-makers with assessments of best practices and market knowledge (Larsson, Hedelin, and Garlin, 2003). Interventions in the form of extra-organizational advice are mostly considered impartial because external advisors are often unattached to prior courses of action (Menon and Pfeffer, 2003). From the absorptive capacity perspective, extra-organizational advice serves as a capability for firms. Thus, advice provided by external advisors enhances firm's ability to find and implement entrepreneurial opportunities with strong risk using the specialized expert analysis in dynamic environments. Resting with this notion, the present study introduces an important new theoretical lens and moderator (extra-organizational advice) to the list of moderators that extant research on the EO-performance research has examined (e.g., Stam and Elfring, 2008; De Clercq et al., 2010; Engelen et al., 2015).

From the absorptive capacity perspective, the study's empirical findings are generally in line with other studies that consider firm level capabilities crucial in leveraging the EO-performance relationship (e.g., Covin and Lumpkin, 2011; Anderson and Eshima, 2013; Engelen et al., 2014). A major insight from the study's findings is that there are

Extra organizational advice can help firms to identify, assimilate, and exploit knowledge from the environment in implementing EO in SMEs in dynamic environments. The study's findings show that limiting the investigation of the EO-performance association to a single

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3 moderator (extra-organizational advice) may not capture the complexity of the relationship
4 (Wiklund and Shepherd, 2005; Engelen et al., 2014). The findings revealed that that the
5 extra-organizational advice facilitates the EO-performance relationship in dynamic markets.
6 Thus, dynamic environment market constitutes a boundary condition for extra-organizational
7 advice. This condition may occur because dynamic environments present an urgent need to
8 acquire new knowledge and information on which SMEs should act by constantly, rapidly,
9 and flexibly reconfiguring their resource bases (Engelen et al., 2014). Therefore, if the
10 present study had only focused on the moderation of extra-organizational advice, a major
11 conclusion would have been that extra-organizational advice is somehow crucial to the EO-
12 firm performance relationship. However, including environmental dynamism in a three-way
13 interaction revealed more nuanced findings suggesting that when firms take external business
14 advice in dynamic environments it helps them to reap higher performance benefits of EO.
15 Indeed, the analysis of individual moderators on the EO-performance is not scarce (e.g.,
16 Wiklund and Shepherd, 2005; Covin et al., 2006). The present study argues that the analysis
17 of individual moderators may be overly simplistic and may conceal more nuanced
18 relationships (Covin and Slevin, 1991; Engelen et al., 2014).
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32 Second, this study contributes to the literature on business advice. Literature on business
33 advice is more consistent in arguing that external sources of advice lead to increases in
34 strategic knowledge and maximizes the potential of the business in enacting entrepreneurial
35 behavior (e.g., Penrose, 1959; Teece, Pisano and Shuen, 1997). Empirical work suggests that
36 extra-organizational advice can help firms to attenuate information and knowledge gaps
37 (Chrisman and McMullan, 2004). In terms of the performance relationship, the study's
38 findings (not hypothesized but shown by the regression analysis in Table 4) show that extra-
39 organizational advice, is related to firm performance, supporting the notion that firms that
40 seek external advice outperform those that lack them (Mole, et al., 2009; Mole, et al., 2011).
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48 Regarding the boundary conditions, the study's findings suggest that the extra-organizational
49 advice amplifies the EO-performance relationship in dynamic environments. Thus, the
50 dynamic environment constitutes a boundary condition for extra-organizational advice in
51 boosting the effect of EO on firm performance. This condition may occur because these
52 environments present an urgent need to acquire new knowledge and information upon which
53 firms should act by constantly, rapidly, and flexibly reconfiguring their resource bases.
54 Existing work has suggested that exogenous uncertainty triggers firms' decision makers to
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3 adopt industry best-practices (DiMaggio and Powell, 1983). Therefore, firms need extra-
4 organizational advice to respond to uncertain environmental conditions.
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7 Practically, the study's findings are relevant to developing economy SMEs managers.
8 Specifically, the results of this study show that extra-organizational advice can help firms in
9 Ghana to implement a strategic orientation to achieve higher performance. More specifically,
10 advice from external sources enables a firm to implement an entrepreneurially oriented
11 strategic posture more effectively and efficiently than it could if it had no such external
12 business advice. The findings suggest that when managers resort to external sources of
13 advice; it explains substantially more performance in at least one developing economy
14 (Ghana). An implication of this is that entrepreneurs should design strategies that encourage
15 efforts to develop the habit of resorting to external business advice in SMEs. This insight is
16 particularly important for SMEs that operate in dynamic environments, which are commonly
17 characterized by regularly erratic customer needs or rapid technological change. There are
18 implications for policy too, since it may be possible for emerging market governments and
19 developmental agencies to promote education and training programs to assist managers or
20 entrepreneurs reap greater benefits EO through extra-organizational advice when the
21 environment is in a state of flux.
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33 The present study has several limitations that offer opportunities for future research. First,
34 study subjective measures of firm performance are employed. The use of self-reported and
35 perceptual measures of firm performance has the potential to introduce respondent bias to the
36 sample (Engelen et al., 2014). Even though prior research offers support for the use of
37 subjective performance measures (e.g., Dess and Robinson 1984; Rauch et al., 2009), it is
38 possible that there are gaps between subjective measures and the objective financial
39 information of the firms studied. Additional research that makes use of objective performance
40 data is strongly encouraged. Second, the cross-sectional sample did not allow us to make
41 causal claims (Antonakis, et al., 2010). A major avenue for future research should be the
42 exclusion of a potential endogeneity bias in this relationship (Antonakis, et al., 2010;
43 Hamilton and Nickerson, 2003). Future studies should deal with this problem by using
44 longitudinal data. Third, the study is limited to the examination extra-organizational advice,
45 arguing that they are particularly important to EO's association with improved performance.
46 Future research could develop an integrated model with both intra and extra-organizational
47 advice in order to compare their effectiveness in implementing firm-level entrepreneurial
48 behavior. Fourth, this research was undertaken in Ghana, a single, and relatively small,
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3 developing country. Ghana is still one of the more typical emerging economies that shares
4 many characteristics with other developing economy countries including widespread poverty
5 and socio-economic inequality and, therefore, offers a rich context to test the impacts of
6 strategic posture from a developing economy perspective (Acquaah, 2007). However, other
7 developing countries may possess unique and varied contextual elements that allow for
8 additional insights and theory development (Boso et al., 2013). Consequently, future research
9 could generalize these findings by testing the study's model in the context of other cultural
10 and institutional settings, and especially other emerging economies (Bruton and Lau, 2008).

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18 In conclusion, this study has identified and found support for the contingent effect of extra-
19 organizational advice on EO-performance relationship in dynamic environments.
20 Specifically, it was found that the influence of EO on firm performance is moderated by
21 extra-organizational advice in dynamic environments. The findings enhanced scholarly
22 understanding on how firms can effectively implement firm-level entrepreneurial behavior to
23 achieve higher performance. This paper has contributed to both EO and business advice
24 research. It outlines theoretically that extra-organizational advice helps a firm to deploy its
25 EO in order to improve its performance in dynamic environments. The findings of the study
26 show that the choice of strategy and a firm's external sources of advice should be consistent.
27 These findings provide insights into how firms should balance their EO and external sources
28 of advice in dynamic environments. Thus, this study highlights and fills an important gap in
29 the EO literature regarding what managers can do best to assure the success of their firms'
30 entrepreneurial activity in dynamic environments.

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Table 1: Factor Table and Descriptive Statistics

Model variable	Item descriptions	Mean (SD)	Factor Loadings (t-values)	Cronbach's α	CR	AVE
Latent Variables						
Proactiveness (Covin and Slevin (1989))	- In our firm, we tend to be ahead of competitors regarding introduction of products and ideas	4.91(1.15)	.85(Fixed)	.83	.82	.65
	- In our firm, we typically initiate actions which competitors then respond to	4.71(1.21)	.75 (11.95)			
	- In our firm we are often the first to introduce new products and services, new ways to produce these, or new administrative methods	4.81(1.32)	.92 (14.33)			
Risk-taking (Miller; 1983; Covin and Slevin (1989))	-In our firm we see bold, wide-ranging acts are necessary to achieve the firm's objectives.	4.35(1.04)	.93 (fixed)	.94	.87	.78
	- In our we have a strong aptitude for high-risk projects (with chances of high returns)	5.15(1.02)	.95 (25.85)			
	- Our firm typically adopts a bold posture when confronted with decisions involving uncertainty, to maximize the exploitation of opportunities.	5.54(1.01)	.88 (18.74)			
Innovativeness Covin and Slevin (1989)	- In our firm, we have a strong emphasis on R&D, technological leadership, and innovations	4.82(1.16)	.83 (fixed)	.95	.94	.69
	- Changes in product or service lines have usually been quite dramatic to achieve competitive advantage	4.67(1.05)	.89 (13.68)			
	- In our firm, one of the main goals is to launch many new lines of products/services in next three years	5.71(1.20)	.88 (13.85)			
Firm performance (Greenley and Foxall, 1997)	-Overall profit levels achieved	3.61(1.56)	.84 (fixed)	.87	.89	.68
	-Profit margins achieved	3.81(1.60)	.91 (15.31)			
	-Return on investment	4.67(1.03)	.84 (14.39)			
	-Sales volume achieved	4.80(1.20)	.89 (12.94)			
	-Shareholder satisfaction with financial performance	4.82(1.16)	.84 (11.68)			
Market orientation (Vorhies and Morgan, 2005)	-Our top managers are able to gather information about customers compared to most important competitors	4.60(1.61)	.94 (fixed)	.91	.95	.74
	-We able to use market research skills to develop effective marketing programmes	4.84(1.47)	.95 (26.32)			
	-Our top managers have the ability to track customer wants and needs compared to most competitors	4.81(1.31)	.93 (25.75)			
	-We able to make full use of marketing research information compared to most important competitors	5.42(1.20)	.94 (25.27)			
	-This company is able to analyse its market information compared to most important competitors	4.68(1.08)	.84 (9.65)			
	-To what extent do you acquire knowledge delivered by private sector consultants and professional organisations, normally for payment, or government sponsored business support agencies about your future strategy?"	3.70 (1.66)	.92(19.45)			
Extra-organizational Advice (Alexiev et al., 2010; McDonald & Westphal, 2003)	-To what extent did you acquire knowledge delivered by private sector consultants and professional organisations, normally for payment, or government sponsored business support agencies about your current strategy?"	3.92 (1.51)	.96 (21.23)	.88	.92	.74
Perceived Environmental Dynamism (Jansen et al., 2006)	-Changes in our market environment are very intense	4.62 (1.60)	.83(Fixed)	.82	.87	.65
	-Clients in our markets regularly demand completely new products and/or services	4.11 (1.62)	.85(16.47)			
	-The markets in which we operate are constantly experiencing changes	4.84 (1.53)	.88(18.34)			
	-Demand fluctuates rapidly and frequently in our markets	4.60 (1.16)	.86 (16.98)			
Observed variables						
	-CEO/manager tenure	14.12(9.61)				
	-CEO/manager advanced degree	.34 (.47)				
	-Firm age (log)	17.38(7.65)				
	-Firm size (log)	24.15(11.16)				
	-Market scope	.47(.53)				
	-Industry type	.54(.42)				

Note. Composite reliability (CR) = 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, Linn and Joreskog, 1974). Average Variance Extracted (AVE) = $\frac{\sum[\lambda_i^2] \text{Var}(X)}{\sum[\lambda_i^2] \text{Var}(X) + \sum[\text{Var}(\epsilon_i)]}$ 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 2: Common Method Bias Nested Models: Goodness-of-fit Statistics

Model	χ^2	Df	χ^2/df	RMSEA	CFI	NNFI
M1: Trait	7349.89***	1560	4.77	.163	.55	.27
M2: Method	1627.91***	958	1.69	.044	.92	.91
M3: Trait-method	1105.22***	963	1.14	.46	.94	.92

*** $p < .001$. df, degrees of freedom; RMSEA=root mean square error of approximation; CFI=comparative fit index; NNFI=non-normed fit index.

Table 3: Bivariate correlations^a (The Square root of Average Variance Extracted in the diagonal)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Firm size (in employees)											
2. Firm age	-.02										
3. Market scope	-.04	.12**									
4. Industry type	.03	.01	.05								
5. Market orientation	-.03	-.07*	-.5	-.03	(.86)						
6. CEO/Manager tenure	.05	.03	.02	.02	.06*						
7. CEO advanced degree	-.01	-.04	-.08*	-.04	-.04	.00					
8. Entrepreneurial orientation	.02	.04	.07*	.00	.29**	.04	.36**	(.84)			
9. CEO external advice seeking	.09*	.03	.04	.12**	.44**	.25**	.33**	.14**	(.86)		
10. Environmental dynamism	.03	.01	.06*	.36**	.12**	.00	.01	.01	.46**	(.80)	
11. Firm performance	.14**	-.16**	-.09*	-.05	.47**	.14**	.18**	.39**	.18**	.12**	(.82)

Note: N=340.

SD=standard deviation

*Correlation is significant at the .05 level.

** Correlation is significant at the .01 level.

^a Logarithm transformation of original variable.

Table 4: Findings of Regression Analyses (dependent variable: firm performance) (N=340)

Variables	Model 1	Model 2	Model 3	Model 4
<i>Control Variables</i>				
Firm age (years)	-.15***	-.17***	-.19***	-.18***
Firm size (employees)	.16***	.12**	.10*	.11**
Market scope	-.06*	-.04	-.05	-.04
Industry type	-.08*	-.10*	-.05	-.07*
Market orientation	.11**	.15***	.17***	.19***
CEO/manager tenure	.12**	.05	.08*	.14**
CEO/manager advanced degree	.13**	.07*	.15***	.18***
<i>Main effect variables</i>				
Entrepreneurial orientation (EO)		.19***	.21***	.24***
Extra-organizational advice (EA)		.17***	.18***	.17***
Perceived environmental dynamism (PED)		.21***	.19***	.24***
<i>Two-way interactions</i>				
H₁: EO x EA			.42***	.44***
EO x PED			.35***	.33***
PED x EA			.29***	.31***
Three-way interaction				.57***
H₂: EO x EA x PED				
<i>Model Fit</i>				
F-value	17.22**	26.41***	32.82***	39.72***
Adjusted R ²	.135	.299	.337	.462
Mean VIF	1.33	1.65	1.94	2.22

Standardized Beta coefficients (in parenthesis) and t-values are reported. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Critical t-values are 2.325, 1.645 and 1.282 respectively (one-tailed test as all hypotheses are one-directional).

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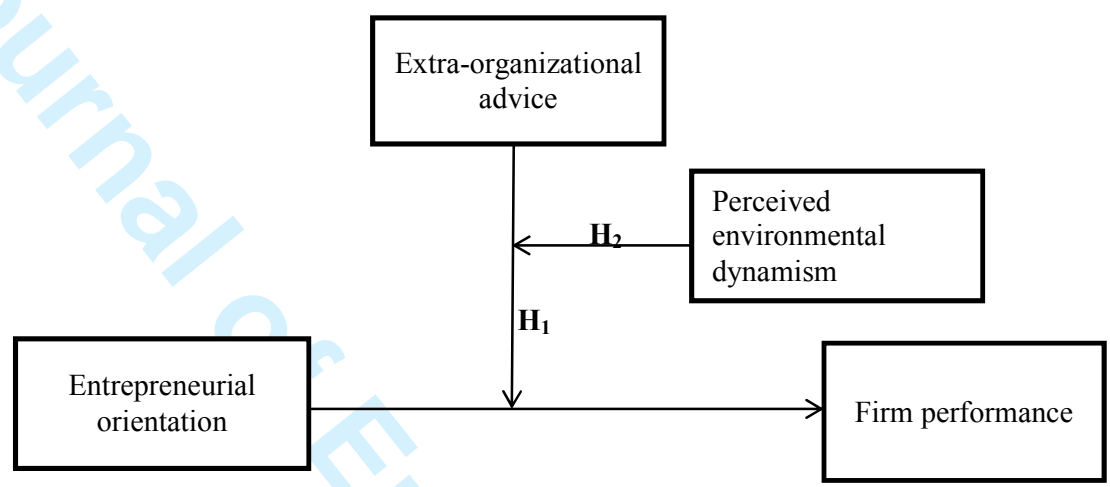
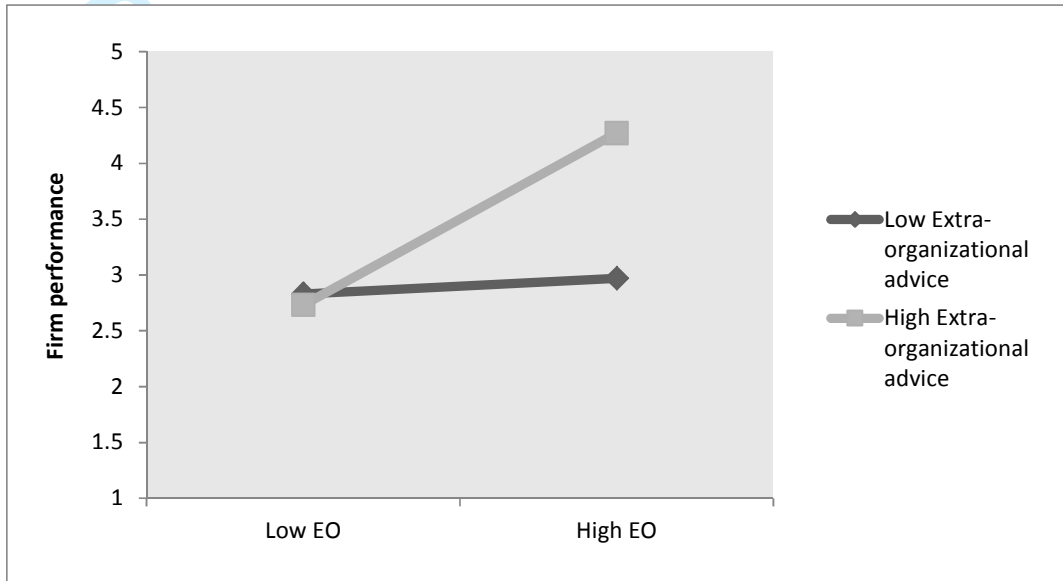


Fig.1. Conceptual Model



Figure

2: Interaction effect of EO with extra-organizational advice on firm performance

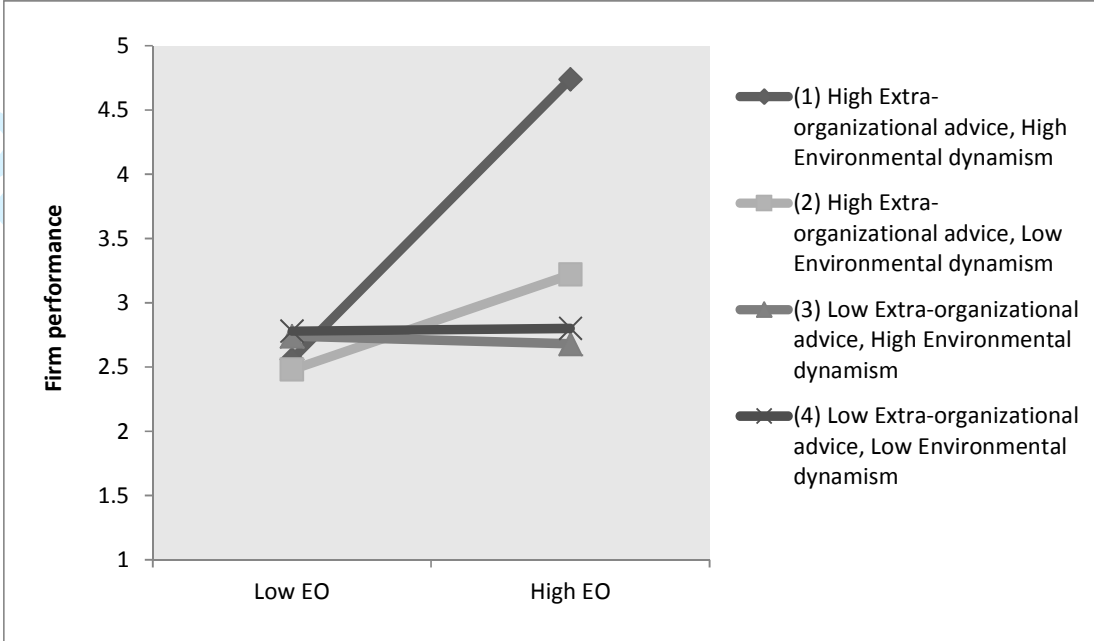


Figure 3: Interaction effect of EO with extra-organizational advice and environmental dynamism on firm performance

Manuscript ID IJEER-12-2015-0320.R1 entitled "Entrepreneurial orientation in dynamic environments: The moderating role of extra-organizational advice"

Referee 1 comments	Response
<p>Both reviewer 2 and myself share a concern that the theoretical development around RBV needed improvement. Put simply the proposition that "A growing strategic management literature argues for the competitive benefits to be obtained from increasing strategic knowledge which can be derived from external sources of advice (Penrose, 1959; Rummelt, 1984; Teece, 1986; Peteraf, 1993; Porter, 1998)" is false. External information cannot be a source of sustainable competitive advantage by itself. Reviewer 2 suggested incorporating absorptive capacity into your explanation, I suggested looking at Bhide or Peteraf for inspiration. Neither of our suggestions was adopted.</p>	<p>We thank the reviewer for this comment. We have introduced the absorptive capacity perspective in our theoretical consideration (Cohen and Levinthal, 1989; Cohen and Levinthal, 1990).</p>
<p>Let's assume you go with absorptive capacity. Lane et al (2006) have this to say: "the capability to disseminate and apply acquired knowledge explained far more variance in firm performance than did the amount of external knowledge acquired". You already think that educational attainment is important. It would be easy to argue that highly educated managers tend to absorb and apply knowledge more effectively within</p>	<p>We have considered your suggestion regarding testing educational attainment as a moderating variable. The data does not support this argument. We thank you anyway.</p>

<p>the firm. You could even test a moderation effect between education and external advice using existing data. If it doesn't work out then feel free to speculate on other mechanisms in your call for future research.</p>	
<p>Reviewer 2</p>	<p>Response</p>
<p>The authors have addressed the feedback in this revision, by more clearly articulating the gap in the current literature and justifying the use of RBV and contingency theory. While it is still not clear how extra-organizational advice from a government source provided free of charge, represents a rare, inimitable, and non-substitutable resource, the authors have now done a good job of justifying and qualifying their use of RBV as a theory. It still seems that it is how SMEs assimilate and use this advice that would provide a performance benefit, not the advice itself.</p>	<p>We thank the reviewer for this complement. As other reviewers do not support our argument for using RBV, we have not incorporated absorptive capacity perspective in our theoretical argument.</p>
<p>The authors have improved this section spelling out the implications for future research. The practical implications for SMEs are interesting, given that the development of EO as a strategic orientation is challenging. On the other hand it seems that seeking external advice either from government sources or consultants is highly beneficial, as it leads to increased performance</p>	<p>We thank the reviewer for this.</p>

<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17</p> <p>outcomes, should the environment be highly dynamic and these CEOs/managers find that a predictive approach, based on historical data is not as useful as gaining extra-organisational advice. These implications are very relevant for SMEs, and the authors are encouraged to disseminate the findings upon publication of this paper.</p>	
<p>18 19 20 21 22 23 24 25 26 27</p> <p>Overall the quality of communication is high and the technical care excellent. There seems to be one spelling error that carried over from the first submission, namely borders on p. 2, line 28, this should probably by borders of the firm.</p>	<p>We thank the reviewer for drawing our attention to this spelling error. We have corrected it.</p>
<p>28 29 30</p> <p>Reviewer 3</p>	<p>Response</p>
<p>31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60</p> <p>Despite massive investigation between EO and firm performance in the literature, this study has brought about some new findings about the moderating role of extra-organizational advice under dynamic environments. However, it is not so clear about the aspects of "dynamic environments", therefore authors should clarify a definition for this in the introduction and significant of the study under dynamic environments. The authors should also strengthen the argument about its impact on the moderating role of extra-organisational advice and the research gap. Though the author mentioned briefly on page 4, it is</p>	<p>We thank the reviewer for this. We have defined what a dynamic environment is in the introduction. “Dynamic environment refers to the perceived degree of change and diversity in customers’ needs and preferences and are associated with increasing variations in customers’ buying behavior and diversity in product requirements (Miller and Friesen, 1982a)”.’.</p>

<p>not convincing enough because this is the main contribution of the study.</p>	
<p>The authors have improved the reasoning to use RBV and clarified the contingency theory to link to their arguments.</p>	<p>Thank you for this.</p>
<p>The methodology is appropriate and the authors have considered the reviewer's comments in this revision.</p>	<p>Thank you</p>
<p>The explanation for figure 3 has been clarified in this version. Please remove the phrase "insert figure 3 here" in the conclusion part, as it is not relevant now.</p>	<p>We thank the reviewer for this.</p>
<p>I agree with the other reviewer that the discussion should be emphasized, linking to the implications of the results (eg, the effect of the relationship under dynamism condition as well as the effect of control variables on the relationship, rather than mention about its contribution on EO literature. This causes repetition in the conclusion.</p>	<p>We thank the reviewer for this. We have corrected this.</p>
<p>In addition, the conclusion could be split to sub-section such as implications to theory/ practice, limitations/ future research, to clarify all the points.</p> <p>The practical contribution is justified and good enough. Regarding the link to theory, though authors reflected on RBV perspective, the contingency theory was ignored.</p>	<p>The journal guidelines do not permit us to do this. We thank the reviewer for this.</p>

<p>Overall, there are some minor typos through out: p 18 (repetition of "That is", p.19 (that that , line 5), page 6 (figure 1 - repeated in 2 sentence in the last sentence of the first paragraph.</p> <p>The title is fine to me and has reflected all the examined concepts</p>	<p>We thank the reviewer for this comment. We have corrected all typos.</p>