

# Linking entrepreneurial orientation and small service firm performance through marketing resources and marketing capability

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## A moderated mediation model

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### Abstract

**Purpose** – The literature establishes complex relationships between entrepreneurial orientation (EO) and performance, with mixed findings suggesting the variability of the magnitude of the relationship between the two. Some studies report a positive relationship, some negative, while some report an insignificant relationship between EO and performance. These conflicting findings suggest that the EO-performance relationship is more complex than a simple main-effects-only relationship. The literature offers two distinct approaches – integrating moderating or mediation variables in advancing the EO-performance relationship. The purpose of this paper is to extend current knowledge by examining underlying processes through which EO contributes to performance and the specific conditions under which this process is facilitated.

**Design/methodology/approach** – To test the hypotheses the authors chose small service firms in Australia. Industry representation included: accommodation and food services; health care services; rental, hiring and real estate services; transport, postal and warehousing; arts and recreation services; retail trade; construction and training services; and professional, scientific and technical services. The services sector offers a unique opportunity to analyze variances in entrepreneurial engagement and organizational outcomes given the competitive intensity within the service sector which requires firms to engage in venturing, renewal and innovation. The proposed hypotheses were tested through a hierarchical regression analysis.

**Findings** – This study finds the support for the mediation effect of marketing capability on the EO-performance relationship. Critically, this study also finds that marketing resources moderates on the indirect effect of EO on performance via marketing capability. The findings supporting both the mediation and moderation effects of marketing capability and marketing resources on the EO-performance relationship (moderated mediation model) suggests that greater insight into how EO influences small service firm performance can be achieved through considering in combination with other firm-level constructs (marketing capability and marketing resources in this study).

**Originality/value** – It addresses the call by prior studies to link the EO construct to theory by embedding marketing resources and marketing capabilities in the EO-performance relationship. Importantly, by accounting for both mediation and moderation effects the authors provide a more complete picture of the EO-performance relationship that highlights the mediating role of marketing capability and the moderating role of marketing resources. This approach helps to reconcile the critical but separate directions proposed by prior studies in advancing the EO-performance relationship.

**Keywords** Performance, Entrepreneurial orientation, Marketing capability, Marketing resources, Moderated-mediation model, Small services

**Paper type** Research paper



## Introduction

The literature has reported mixed findings of the relationship between entrepreneurial orientation (EO) and performance. Some studies have found a positive relationship, some negative, while some even report an insignificant relationship between EO and performance (Rauch *et al.*, 2009). These conflicting findings suggest that the EO-performance relationship is more complex than a simple main-effects-only relationship (see also Wiklund and Shepherd, 2005; Kollmann and Stöckmann, 2014). The purpose of this study is to unpack the EO-performance relationship by examining the mediating and moderating roles played by important organizational capabilities and resources within the EO-performance relationship.

Drawing on previous research highlighting that EO reflects a disposition toward entrepreneurial activity (Wiklund and Shepherd, 2003) and in combination with an orientation-behavior gap as deduced by the RBV (Kollmann and Stöckmann, 2014), we propose marketing capability as an intervening mechanism and marketing resources as a facilitating condition in the EO-performance relationship. We proffer that such mediating and moderating components are critical to achieving a more complete understanding of how EO actually influences performance. Hence, through a moderated mediation framework (Preacher *et al.*, 2007) we examine how EO influences performance of small service firms through marketing capability and whether marketing resources facilitate or impede this process. Our efforts contribute to theory in many ways.

First, the service sector has become an extremely large part of the modern economy (Kohtamaki *et al.*, 2015; Ostrom *et al.*, 2015). Underpinning the success of service firms is the effective development and delivery of services. To this end, the role of EO is highlighted in the literature (Jambulingam *et al.*, 2005; Altinay *et al.*, 2016). However, there is a paucity of empirical research that explores the impact of EO on the performance of service firms (Lee and Lim, 2009), particularly small service firms. This is surprising given small service firms dominate the global economy (Snell *et al.*, 2015). Therefore, our study examining the EO-performance relationship in the small service firm context fills this gap and addresses the call for more research examining the effect of EO on performance of service firms (Lee and Lim, 2009). Although the EO concept is argued to be relevant to any firm irrespective of its size and type (Dada and Watson, 2013), placing EO research in the small service firm context is critical. This is because the service sector offers a unique opportunity to analyze variances in entrepreneurial engagement and organizational outcomes given the competitive intensity within the service sector which requires firms to engage in venturing, renewal and innovation. Further, small firms have fewer hierarchical levels and shorter chains of command, compared to large firms whose EO benefits may be hindered by organizational impediments such as hierarchical administrative structures (De Clercq *et al.*, 2013).

Second, prior literature has offered two distinct approaches in advancing the EO-performance relationship – one of which is advancing the contingent effects on EO-performance relationship beyond environmental contexts (Covin and Lumpkin, 2011). Within this stream, numerous studies have examined the effect of different moderators on the EO-performance relationship, such as the internal social exchange process (De Clercq *et al.*, 2010), transformational leadership behaviors (Engelen *et al.*, 2015, 2016) and top management's social capital (Engelen *et al.*, 2015, 2016), among others. The other approach proposed by Zahra *et al.* (2006) and Baker and Sinkula (2009) calls for future research to investigate the EO-performance relationship by identifying the key mediators that link the two variables. Studies pursuing this line of inquiry have examined the mediating effects on the EO-performance relationship, including learning orientation (Wang, 2008), organizational learning capability (Alegre and Chiva, 2013; Altinay *et al.*, 2016) and innovation performance (Alegre and Chiva, 2013), exploratory and exploitative innovations (Kollmann and Stöckmann, 2014), and differentiation and cost leadership strategies (Lechner and Gudmundsson, 2014).

While these studies make important contributions in advancing our understanding of the link between EO and performance, no study has incorporated both approaches to unpack the EO-performance relationship. This is a critical oversight that warrants academic inquiry because adopting the moderating approach may only explain the conditions under which EO affects performance, while adopting the mediating approach may only explain the process through which EO affects performance. In this sense, a more complete understanding of how and when EO contributes to performance is lacking. The lack of knowledge in this area may be illustrative of why some small firms grow and others do not (Anderson and Eshima, 2013). By accounting for both mediation and moderation effects, our study provides a more holistic understanding of the EO-performance relationship that highlights the mediating role of marketing capability and the moderating role of marketing resources. Moreover, this approach contributes to our understanding of the circumstances under which pursuing entrepreneurial strategic posture result in favorable performance outcomes. It also helps to reconcile the critical but separate directions proposed by prior studies in advancing the EO-performance relationship (Zahra *et al.*, 2006; Baker and Sinkula, 2009; Covin and Lumpkin, 2011; Kollmann and Stöckmann, 2014).

Third, prior studies acknowledge the important role of innovation and organizational learning in linking EO and performance (Alegre and Chiva, 2013; Kollmann and Stöckmann, 2014; Altinay *et al.*, 2016). However, our understanding of the role of the marketing function (accumulation and deployment of marketing resources and capability) in facilitating the EO-performance relationship is limited. This is surprising given it is suggested that as markets become increasingly competitive and customers more demanding, the role of marketing is critical to driving the success of small service firms (Coviello *et al.*, 2006; Snell *et al.*, 2015). The approach taken in this paper addresses the call by Miller (2011) to link the EO construct to theory by embedding marketing resources and marketing capabilities in the EO-performance relationship. We also extend the contingency models that have dominated entrepreneurship research (Short *et al.*, 2008) by specifying the condition under which the EO-marketing capability-performance relationship is strongest. Figure 1 presents the theoretical framework of this study.

## Theory and hypotheses development

### *EO and performance*

EO is the “driving force behind the organizational pursuit of entrepreneurial activities” (Covin and Wales, 2012, p. 1). EO is seen as the firm’s disposition toward accepting entrepreneurial practices, processes and decision-making (Matsuno *et al.*, 2014), characterized by innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy – all of which facilitate the pursuit of new opportunities (Lumpkin and Dess, 1996; Lumpkin *et al.*, 2009; Altinay *et al.*, 2016). EO in this sense is separated from actual involvement in entrepreneurial activities by capturing aspects of a firm’s willingness to engage in entrepreneurial activities and policies and practices that provide a basis for entrepreneurial decisions and actions (Rauch *et al.*, 2009). EO is also regarded as a firm’s critical strategic posture that contributes to small service firm performance (Jambulingam *et al.*, 2005;

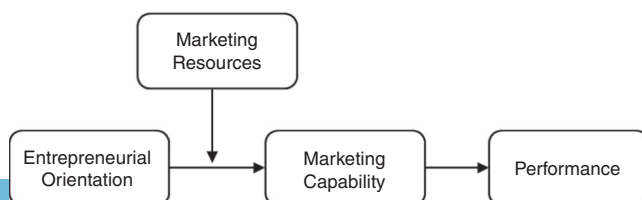


Figure 1.  
Theoretical model

Altinay *et al.*, 2016) because the emphasis on anticipating demand and aggressively positioning continuous service improvement often result in strong performance (Tajeddini, 2010). Such strategic posture is rooted in a service firm's culture, rather than an event to create value by bringing together a unique package of resources to exploit an opportunity.

Although findings from a meta-analysis of 51 studies conducted by Rauch *et al.* (2009) found support for a positive relationship between EO and performance, findings from other studies did not replicate this positive relationship (e.g. Baker and Sinkula, 2009). In picking up this point, Baker and Sinkula (2009), Covin and Lumpkin (2011), and Kollmann and Stöckmann (2014) suggest that resolving this confounding issue requires a more complete understanding of and deeper inquiry into the mechanisms (mediators) and conditions (moderators) that help to translate EO into superior performance. Some scholars suggest that performance benefits of EO are low when there are no corresponding entrepreneurial activities taking place (e.g. Wiklund and Shepherd, 2005; Kollmann and Stöckmann, 2014; Altinay *et al.*, 2016). Consequently, the explanatory power of the EO-performance relationship may be hindered if EO is not converted into appropriate actions (Kollmann and Stöckmann, 2014; Altinay *et al.*, 2016). Against this background, drawing on the RBV and focusing specifically on the marketing function, we propose marketing capability as a corresponding entrepreneurial behavior linking EO to performance and contend that this mediated relationship is further moderated by marketing resources.

#### *The important role of resources and capabilities in the EO – performance relationship in small service firms*

Small firms, either services (Cho and Menor, 2012) or manufacturing (Verhees and Meulenbergh, 2004), are known to possess limited resources and capabilities. Since EO is a resources-intensive strategic posture (Covin and Slevin, 1991), the availability or constraint of strategically important resources and capabilities would directly impact on the breadth and depth of entrepreneurial opportunities able to be pursued. Therefore, EO, in conjunction with resources and capabilities should facilitate stronger performance outcomes among small service firms. In fact, prior research has acknowledged the importance and inherent scholarly value of investigating the contingent roles of resources and capabilities internal to the firm in facilitating EO – performance relationship (e.g. Wiklund and Shepherd, 2003; Anderson and Eshima, 2013). Further, EO is argued to interact with other organizational factors (i.e. resources and capabilities) to produce the outcomes for service firms, as opposed to driving service firm performance independently (Tajeddini, 2010).

#### *The mediating role of marketing capability*

The RBV is one of the most influential and widely adopted theories among marketing, management and entrepreneurship scholars exploring performance differentials between firms (e.g. Villanueva *et al.*, 2012; O'Cass and Sok, 2014). It suggests that firms within an industry are heterogeneous in terms of their resources and capabilities, and this heterogeneity is the source of competitive advantage that firms gain in their marketplace (Barney, 1991; Mele *et al.*, 2014). Resources comprise tangible and intangible assets, such as financial, human and intellectual property; while capabilities are the “glue” that brings these resources together and enables a firm to deploy them advantageously (Day, 2011).

Some scholars contend that resources are static and possess no real value in isolation (e.g. Eisenhardt and Martin, 2000; Priem and Butler, 2001). Instead, it is the firm's ability to deploy resources (the firm's capabilities) that better explain performance differentials between firms (Teece *et al.*, 1997; Priem and Butler, 2001; Kang *et al.*, 2014). Thus, conceptual developments within the RBV literature contend that while resources have the potential to enable firms to achieve superior performance their potential value remains untapped and

can only be realized if and when deployed by accompanying organizational capabilities (Ketchen *et al.*, 2007). The RBV suggests that small service firms, due to the inevitable variations in their resource and capability profiles, differ in terms of their ability to achieve performance outcomes (see also Cho and Menor, 2012; Ramanathan and Ramanathan, 2013).

In line with the RBV, it can be expected that EO by itself may not be sufficient for the realization of superior performance given it only reflects a firm's disposition towards, rather than actual involvement in, entrepreneurial activity (e.g. Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003). This implies that while EO is critical to helping small service firms to achieve superior performance (e.g. Jambulingam *et al.*, 2005; Tajeddini, 2010), it is by itself an insufficient condition. Instead, small service firms need to manifest its EO through specific entrepreneurial activities to realize superior performance (Altinay *et al.*, 2016).

Small firms are inherently fixated on the concept of new entry (Lumpkin and Dess, 1996; Tajeddini, 2010; Kollmann and Stöckmann, 2014). They adopt an entrepreneurial posture to identify new business opportunities with potentially large returns and strive to obtain first-mover advantages (Lumpkin and Dess, 1996). They strive to enter new or established markets with either new or existing goods or services (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003; Kollmann and Stöckmann, 2014). In doing so, they require the mechanisms to not only develop and introduce new offerings to the market but also ensure that such offerings are delivered to customers in ways that align with their needs and are better than competitive offerings (see also, Kang *et al.*, 2014). We argue such mechanism may be marketing capability, which reflects a firm's capacity to undertake marketing activities such as promoting the business, establishing position in the market, identifying target markets, conducting market analysis, promoting the business, setting and meeting sales goals, and setting and attaining profit goals. Previous research identifies marketing capability as a key customer-linking mechanism through which firms identify and serve customer needs (Ngo and O'Cass, 2012). The importance of marketing capability has been highlighted in the literature focusing on large (e.g. O'Cass and Sok, 2013) and small (Coviello *et al.*, 2006) service firms, where firms are argued to be inherently relational and focus on managing the total buyer-seller interaction process (Grönroos, 1991; Kohtamaki *et al.*, 2015). It is said to help service firms develop and commercialize new and innovative service offerings ahead of competitors, move into new markets and serve new customers (see also O'Cass and Sok, 2013), thus facilitating sales growth, customer retention, market share, return on investment and overall performance of small service firms (Coviello *et al.*, 2006).

Given EO captures the spirit of creating new business opportunities, small firms often emphasize undertaking risky ventures and are the first to come up with proactive innovations (Lumpkin and Dess, 1996). Realizing these outcomes requires small service firms to manifest their EO through marketing capability and introduce breakthrough innovations. It is said that the development and delivery of new and innovative services hinges on a small service firm's ability to utilize information about its environment to enhance the success of the service offerings (Jambulingam *et al.*, 2005). Marketing capability allows small service firms to incorporate emerging trends in the market in the development and introduction of unique service offerings that align better with the needs of customers, thus facilitating customer relationship (Kohtamaki *et al.*, 2015). It deals with how new entry is undertaken (Lumpkin and Dess, 1996) and represents the key "know-how" mechanism that allows small service firms to realize new entry opportunities and maximize performance. Marketing capability thus allows small service firms to realize their emphasis of obtaining first-mover advantages by shaping the rules of competition in ways that rivals find difficult to imitate, thus leading to superior performance (see also Kollmann and Stöckmann, 2014). Therefore:

H1. Marketing capability mediates the relationship between EO and performance.



*The moderating role of marketing resources*

We go one step further to suggest that while EO is conducive to providing the fundamental basis upon which small service firms achieve superior performance through marketing capability, small service firms must also have access to complementary marketing resources to facilitate marketing capability development. Prior research highlights the importance of resources (i.e. human resources) for improved performance among service firms (Lucas and Wilson, 2008; Michel *et al.*, 2009). Given their limited resources, small service firms often face tremendous challenges in allocating their scarce resources to facilitate the development of specific activities (Cho and Menor, 2012). Consequently, those possessing a certain level of strategically important resources (i.e. marketing resources) are more likely to develop and deliver superior offerings to customers in ways better than competitors, which is fundamental to capturing and retaining customers. We conceptualize marketing resources as the substantial amount of resources (e.g. people, time and money) that firms have to invest in marketing-related activities such as promotion, pricing, distribution, service development, business network relationships development and customer relationship development.

Further, given small firms' propensity to innovate frequently and take risks they are often faced with uncertain returns and high failure costs. Kollmann and Stöckmann (2014) argue that the full potential of EO may not be realized if resources are lacking because such conditions inhibit the actual implementation of the firm's entrepreneurial spirit. Substantial commitment of complementary marketing resources is therefore required to support the firm's entrepreneurial ideology and facilitate the enactment of marketing capability. Such resource commitments may be critical to providing the small service firm the necessary support to facilitate the development and delivery of superior service offerings to customers in ways better than competitors.

Thus, with the endowment of marketing resources, the value of EO increases because it provides small service firms with the necessary condition under which they have the required support to link with customers and deliver superior service offerings to customers, thus obtaining first-mover advantages and achieve superior performance. Conversely, when small service firms are deprived of marketing resources, they lack the fundamental factors needed to develop marketing capability. Accordingly, they may be hindered from achieving superior performance given they are restricted from engaging in entrepreneurial activities and lack the critical resources to deliver superior offerings to customers that put them ahead of their competition. Therefore:

- H2.* The indirect effect of EO on performance through marketing capability is moderated by marketing resources, such that the indirect effect is stronger when marketing resources are high than when they are low.

**Research method**

To test our hypotheses, we focus on small service firms because small businesses dominate the global economy (e.g. Caniëls and Romijn, 2005). In Australia, small business accounts for over 96 percent of all businesses and employs approximately 4.8 million people (Department of Industry Innovation, Science, Research and Tertiary Education (DIISRT), 2012). Approximately 84 percent of the total small business sector in Australia is attributable to service-based businesses (DIISRT, 2012). Therefore, promoting the competitive position of small service businesses is important for developing national economies and achieving future growth (Snell *et al.*, 2015).

Using the census list of small service businesses in Australia, we randomly drew up a sample of 3,000 businesses that had total employees of less than 20 employees. The respective key informants were either the chief executive officer or founder of the business. An e-mail with personalized log-in data to access the online survey was sent to the

key informants. Of the 3,000 questionnaires distributed online, 495 completed surveys were returned. In total, 26 questionnaires were discarded due to the high number of missing data, which resulted in a final sample size of 469 (approximately 16 percent response rate). Industry representation included accommodation and food services (63); health care services (62); rental, hiring and real estate services (56); transport, postal and warehousing (49); arts and recreation services (54); retail trade (62), construction and training services (52); and professional, scientific and technical services (71).

To check for non-response bias, we compared whether early respondents (the first 10 percent of responses received) responded differently from late respondents (the last 10 percent of responses received) using the *t*-test (Gupta and Batra, 2016). The *t*-test results revealed no significant differences between the two groups on marketing resources, marketing capability, EO, and performance, suggesting that non-response bias was not a problem in the data.

### Measures

As shown in the Table AI, all measures were adapted and refined from existing literature with minor word modifications to increase their applicability to the context and purpose of the current study. Marketing resources was measured using the eight-item scale adapted and refined from Coviello *et al.* (2006), ranging from 1 “strongly disagree” to 5 “strongly agree”. Sample items are a “Substantial amount of our marketing resources (e.g. people, time, money) are invested in promotion-related activities” and a “Substantial amount of our marketing resources (e.g. people, time, money) are invested in pricing-related activities”.

Marketing capability was measured using a six-item scale adapted and refined from Chen *et al.* (1998) and Vorhies and Morgan (2005), ranging from 1 “completely uncertain” to 5 “completely certain”. Sample items are “At this point in time (i.e. right now), how certain are you that your business can identify target markets” and “At this point in time (i.e. right now), how certain are you that your business can establish position in the market”.

EO was operationalized as a gestalt unidimensional construct capturing the aspects of innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy. These five dimensions were aggregated together to measure EO. This approach is consistent with prior studies measuring EO as a unidimensional construct (e.g. Rauch *et al.*, 2009; Engelen *et al.*, 2015, 2016; Gupta and Batra, 2016). It was measured using the 18-item scale adapted and refined from Covin and Slevin (1989), George *et al.* (2001) and Lumpkin *et al.* (2009). Items ranged from 1 “strongly disagree” to 5 “strongly agree”. Representative items include “We actively introduce improvements and innovations in our business” and “We try to out-do and out-maneuver the competition as best as we can”.

Performance was measured using the five-item scale adapted and refined from O’Cass and Sok (2014) and Gupta and Batra (2016). It captures the multifaceted aspect of organizational performance including: sales growth, profit margin, return-on-investment, customer satisfaction and customer retention/loyalty. A five-point scale, ranging from 1 “much lower than expectation” to 5 “much higher than expectation” was used. This approach is consistent with Venkatraman and Ramanujam’s (1986) suggestion that a broad conceptualization of business performance should reflect the organization’s overall effectiveness in meeting multiple goals. Prior studies also highlight the utility of subjective measures since they demonstrate strong reliability and validity, and are particularly useful for assessing broader performance measures (Dess and Robinson, 1984). Although subjective measures have been criticized for being potentially respondent biased – knowingly or unknowingly (Chandler and Hanks, 1993), Rauch *et al.* (2009) found no inflation of the relationship between EO and performance due to self-assessed performance measures in their broad meta-analysis. They further argue that common method bias is not a critical issue in this context. Particularly, subjective performance measures have been widely adopted in small

business research (e.g. Wiklund and Shepherd, 2003; Anderson and Eshima, 2013; O’Cass and Sok, 2014) and are argued to be consistent with objective measures (Kollmann and Stöckmann, 2014; Engelen *et al.*, 2015, 2016). We controlled for firm age, firm size and industry type (service categories). We measured firm size and firm age with the logarithm of the total number of fulltime employees and the number of years firms had been operating, respectively. Industry type (service categories) was (dummy) coded by the sector the firms operate in. This approach helped prevent skewness.

*Reliability and validity*

We performed confirmatory factor analysis of all constructs using SPSS AMOS 20, which included all multiple item scales and covariates. The model fits the data reasonably well ( $\chi^2(1048) = 1496, p < 0.01$ ; CFI = 0.95; TLI = 0.96; RMSEA = 0.04). The factor loading of all items was relatively high (Bagozzi and Yi, 1988) and the average variance extracted (AVE) of all constructs exceeded the recommended benchmark of 0.50 (Fornell and Larcker, 1981), providing support for convergent validity (Bagozzi and Yi, 1988). The composite reliability of all constructs also exceeded the recommended benchmark of 0.70 (Nunnally, 1978).

Discriminant validity was established by first comparing the square roots of the AVE values against the off-diagonal correlations (Fornell and Larcker, 1981). As shown in Table I, the square roots of the AVE were consistently greater than the off-diagonal correlations, providing support for discriminant validity. Discriminant validity was also assessed by comparing the scores of individual correlations with their respective reliabilities (Gaski and Nevin, 1985). As shown in Table I, no individual correlations were greater than their respective reliabilities, providing further support for discriminant validity. In addition, the value of variance inflation factor (VIF) for each independent variable (marketing resources: VIF = 1.88; marketing capability: VIF = 1.46; EO: VIF = 1.94) was well below the threshold value of 10, suggesting that the proposed model was satisfactorily free of multicollinearity. Descriptive statistics and correlations are reported in Table I. Collectively, these results establish the validity and reliability of our measures.

*Common method bias*

Because this is a single-informant study, common method variance might potentially introduce spurious relationships among variables. As such, we undertook several steps to mitigate potential common method concerns. First, we separated the measures of performance from those of the independent variables such that they appeared unrelated in the survey instrument (see also Podsakoff *et al.*, 2003). Second, the results from Harman’s (1976) single-factor test indicated that items did not load on a single factor. Third, since the hypotheses focus on the mediation and interaction effects, the model is less likely to suffer from potential bias due to respondents’ implicit

Construct	M	SD	CR	AVE	1	2	3	4	5	6	7
1. Firm age	–	–	–	–	–	–	–	–	–	–	–
2. Firm size	–	–	–	–	0.05	–	–	–	–	–	–
3. Industry type	–	–	–	–	0.14**	0.10*	–	–	–	–	–
4. Marketing resources	3.25	0.87	0.88	0.54	0.12**	0.03	0.18**	<i>0.73</i>	–	–	–
5. Marketing capability	3.61	0.89	0.91	0.68	0.02	0.00	0.06	0.50**	<i>0.82</i>	–	–
6. Entrepre. orientation	3.37	0.72	0.81	0.59	0.12**	0.08	0.09*	0.58**	0.53**	<i>0.77</i>	–
7. Performance	3.18	0.75	0.84	0.60	0.06	0.05	0.00	0.43**	0.48**	0.46**	<i>0.77</i>

**Table I.** Construct statistics and correlation matrix

**Notes:** CR, composite reliability; SD, standard deviation; M, Mean. The square root of average variance extracted (AVE) estimates are shown in the italicized diagonal entries. \*,\*\*Significant at the 0.5 and 0.01 levels (two-tailed), respectively



theories. Prior analytical derivations and simulation studies show that common method bias reduces the probability to find support for significant interaction effects (Evans, 1985; Siemsen *et al.*, 2010). Finally, we followed Lindell and Whitney (2001) in selecting “personal happiness”, a variable theoretically unrelated to the dependent variable of business performance ( $r = 0.04$ , ns), as the marker variable for common method bias analysis. These results provide evidence confirming that common method bias was not a serious threat to this study.

## Results

A hierarchical regression approach was adopted to test the hypotheses. *H1* proposes that marketing capability mediates the relationship between EO and performance. We adopted the procedure recommended by Baron and Kenny (1986) to test this mediation hypothesis in which four conditions need to be met: the effect of the independent variable on the dependent variable must be significant, the effect of the independent variable on the mediating variable must be significant, the effect of the mediating variable on the dependent variable must be significant, and when the mediating variable is included in the model, the effect of the independent variable on the dependent variable must be insignificant for full mediation or reduce in size for partial mediation. As shown in Table II the effect of EO on performance ( $\beta = 0.47$ ,  $t = 11.19$ ,  $p < 0.001$ ) and marketing capability ( $\beta = 0.54$ ,  $t = 13.48$ ,  $p < 0.001$ ) is significant, satisfying the first and second conditions. Marketing capability is also found to have a significant effect on performance ( $\beta = 0.34$ ,  $t = 7.33$ ,  $p < 0.001$ ), satisfying the third condition. The results also show that when marketing capability is included in the model, the effect of EO on performance becomes weaker ( $\beta = 0.47$ ,  $t = 11.19$  vs  $\beta = 0.28$ ,  $t = 7.33$ ), thus satisfying the fourth condition for partial mediation. Consequently, *H1* is supported.

Following prior research (e.g. Cole *et al.*, 2008; Ng *et al.*, 2008), we performed an additional analysis using the bootstrapping method to further substantiate the mediation finding. The results show that the indirect effect of EO on performance through marketing capability is significant ( $\beta = 0.18$ , LLCI = 0.12, ULCI = 0.25), thereby providing further support for *H1*.

*H2* proposes that the indirect effect of EO on performance through marketing capability is moderated by marketing resources, such that the indirect effect is stronger when marketing resources are high than when they are low. We adopted the procedure recommended by Preacher *et al.* (2007) to test this moderated mediation hypothesis in which four conditions need to be met: the effect of the independent variable on the dependent

Variables	Model 1: performance		Model 2: MC		Model 3: performance
	Step 1	Step 2	Step 1	Step 2	Step 3
<i>Control</i>					
Age	0.06	0.01	0.03	0.10**	-0.04
Size	0.06	0.10**	0.01	0.05	0.08**
Industry type	0.00	0.03	-0.07	-0.04	0.04
<i>Independent</i>					
EO		0.47***		0.54***	0.28***
<i>Mediator</i>					
MC					0.34***
$R^2$	0.008	0.22	0.006	0.29	0.30
Adjusted $R^2$	0.002	0.21	0.000	0.28	0.29
$\Delta R^2$		0.22***		0.29***	0.08**

**Notes:** EO, entrepreneurial orientation; MC, marketing capability. Standardized regression coefficients are reported. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.10$

**Table II.**  
Results of hierarchical  
regression analysis  
for mediation

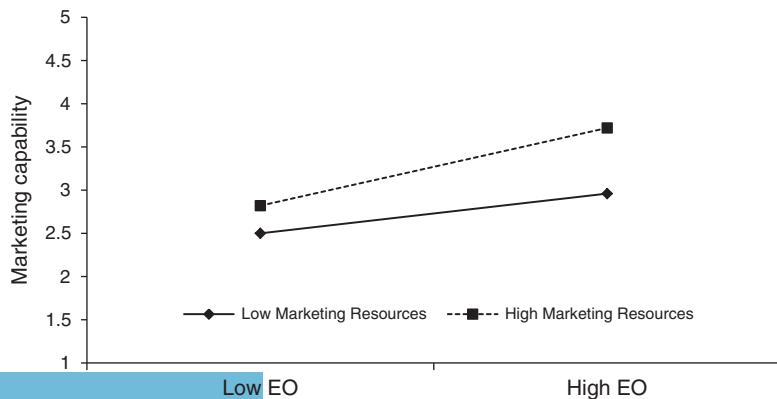
variable is significant, the effect of the interaction between the independent variable and the moderating variable on the mediating variable is significant, the effect of the mediating variable on the dependent variable is significant, and the indirect effect of the independent variable on the dependent variable via the mediating variable differ at different levels of the moderating variable. The results reported in Table II show that the effect of EO on performance is significant ( $\beta = 0.47, t = 11.19, p < 0.001$ ), satisfying the first condition. In addition, as shown in Table III, the interaction between EO and marketing resources has a significant effect on marketing capability ( $\beta = 0.11, t = 2.93, p < 0.001$ ), thus satisfying the second condition. A simple slope test was also undertaken to plot the interaction effect at one standard deviation below and above the mean of the moderator (marketing resources). The results show that the relationship between EO and marketing capability is stronger for high levels (one standard deviation above the mean score (+1SD)) of marketing resources ( $\beta = 0.56, t = 3.14, p < 0.001$ ), than for low levels (one standard deviation below the mean score (-1SD)) of marketing resources ( $\beta = 0.30, t = 1.71, p < 0.10$ ) (see Figure 2).

Marketing capability was also found to have a significant effect on performance ( $\beta = 0.34, t = 7.33, p < 0.001$ ), satisfying the third condition. The statistical significance test

Variables	Model 1	Marketing capability Model 2	Model 3
<i>Control</i>			
Age	0.04	0.11**	0.11**
Size	0.01	0.04	0.04
Industry type	-0.07	-0.01	-0.01
<i>Independent</i>			
EO		0.35***	0.34***
MR		0.28***	0.27***
<i>Interaction</i>			
EO × MR			0.11***
$R^2$	0.006	0.33	0.34
Adjusted $R^2$	0.000	0.32	0.33
$\Delta R^2$		0.32***	0.01****

**Notes:** EO, entrepreneurial orientation; MR, marketing resources. Standardized regression coefficients are reported. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ ; \*\*\*\* $p < 0.10$

**Table III.**  
Results of hierarchical moderated regression analysis for moderated mediation



**Figure 2.**  
Simple slope analysis result

recommended by Preacher *et al.* (2007) was adopted to examine the fourth condition. Specifically, the bootstrapping procedure was employed to gain further insight into how the indirect effect of EO on performance through marketing capability differs at low (one standard deviation below the mean score (-1SD)), mean, and high (one standard deviation above the mean score (+1SD)) levels of marketing resources. The results shown in Table IV indicate that the indirect effect of EO on performance via marketing capability is strongest at high levels of marketing resources (LLCI = 0.096, ULCI = 0.223), thus satisfying the fourth condition. Consequently, *H2* is supported.

## Discussion

Although EO is considered to have a positive impact on performance, the considerable variation in the literature when testing the EO-performance relationship (Rauch *et al.*, 2009) calls for a broader approach in understanding how and when EO contributes to performance. This variation underscores the importance of including both moderators (Covin and Lumpkin, 2011) and mediators (Baker and Sinkula, 2009) in understanding the dynamics of the EO-performance relationship. By examining the underlying process through which EO contributes to the performance of small service firms and the specific condition under which this process is facilitated, we advance the idea that the EO-performance relationship is more complex than a simple main-effects-only relationship (Kollmann and Stöckmann, 2014). We also explain why some small service firms might manifest a low performance when the managers show a clear EO attitude: the marketing capability and marketing resources links would be missing in this case.

We draw on a major theoretical perspective – the RBV – to shed light on the role of marketing capability and marketing resources in facilitating the EO-performance relationship. By embedding the relationship between EO and performance in the RBV we specifically address the call by Miller (2011) to connect the EO construct more closely to theoretical perspectives. Our theoretically derived and empirically validated model underscores the role of marketing in EO implementation.

Consistent with prior research (see the meta-analysis on the EO-performance relationship by Rauch *et al.*, 2009), our study finds that EO has a positive and significant relationship with the performance of small service firms. However, our study also shows that EO influences the performance of small service firms through entrepreneurial activity undertaken with a strong focus on marketing (i.e., marketing capability). This finding not only is consistent with prior studies but also provides credence to the recent extension of the EO-performance research stream focusing on the intermediate links between EO and performance (e.g. Rauch *et al.*, 2009; Alegre and Chiva, 2013; Kollmann and Stöckmann, 2014). Our study advances current knowledge by suggesting that to achieve superior performance, small service firms need to implement EO through marketing capability which represents an important behavioral manifestation of the small service firm's EO and the key to achieving superior performance.

This result also helps explain the inconsistent findings among previous studies examining the effect of EO on performance. For instance, the finding of an insignificant effect of EO on performance may be due to the possibility that, despite an orientation toward

**Table IV.**  
Conditional indirect  
effect of EO on  
performance across  
levels of  
marketing resources

Moderator	Level	Conditional indirect effects of EO on performance				$z$
		Effect	SE	LLCI	ULCI	
Marketing resources	Low	0.078	0.029	0.027	0.143	2.38
	Mean	0.111	0.028	0.065	0.174	3.25
	High	0.145	0.031	0.096	0.223	4.13

entrepreneurship, small service firms have not undertaken any corresponding activity, such as marketing capability, that is capable of enhancing performance. The finding also supports the suggestion that EO should not be confused with actual entrepreneurial behavior (Kollmann and Stöckmann, 2014). The substantial amount of variance explaining the effect of EO on marketing capability ( $\beta = 0.54$ ,  $t = 13.48$ ,  $p < 0.001$ ) also suggests that EO is an important means to promote marketing capability and it is marketing capability that is the key to superior performance.

Particularly, this finding also contributes to the theorizing on RBV. The foundation of the EO-performance relationship has rarely been explicated in existing research (Wiklund and Shepherd, 2011; Kollmann and Stöckmann, 2014). Our study, however, uses the RBV to clearly illustrate its approach. EO is a starting point for small service firms to generate superior performance, supporting the assertion that EO offers small service firms the abilities to utilize and leverage their resources to pursue market opportunities more effectively than their industrial rivals. Given EO reflects the small service firm's disposition toward entrepreneurial activity (Wiklund and Shepherd, 2003) and, having shown the importance of marketing capability as a mediating effect, this study contributes to the EO literature via the theoretical lens of RBV by emphasizing the specific activity a small service firm might invest resources in to stand a better chance to compete successfully in the competitive environment.

Moreover, the support for the moderating effect of marketing resources on the indirect effect of EO on performance of small service firms via marketing capability found in this study contributes to the literature by providing empirical evidence supporting the conditional nature of the EO-performance relationship. This finding builds on the contingency perspective that has dominated entrepreneurial research, and identifies the circumstances where the moderating effect of marketing resources on the EO – marketing capability – performance is strongest. This finding addresses the call by Miller (2011) to clarify the role of the firm's internal resources in leveraging the effect of EO on performance among small firms. In particular, the finding that the indirect effect of EO on performance of small service firms via marketing capability is strongest at a high level of marketing resources, compared to a medium and low level of marketing resources, provides credence to the RBV assertion that the concurrent pursuit of individually valuable resources increases causal ambiguity and resource interconnectedness – both of which make it extremely hard for competitors to imitate (Reed and Defillippi, 1990; Collis, 1991).

The findings supporting both the mediation and moderation effects of marketing capability and marketing resources on the EO-performance relationship (moderated mediation model) affirm Wiklund and Shepherd's (2005, p. 72) suggestion that greater insight into how EO influences performance can be achieved "through investigating the orchestrating themes and integrative mechanisms that ensure complementarity among a firm's various aspects". It also explains Messersmith and Wales' (2013) view that EO effects need to be considered in combination with other firm-level constructs (marketing capability and marketing resources in this study) in order to better understand its performance outcome. Therefore, it appears that implementing EO and actualizing its full potential cannot be achieved through ad hoc manipulations of any single factor (Kollmann and Stöckmann, 2014). Rather, it is important that various internal levers (such as marketing capability and marketing resources) are holistically aligned with EO.

Our study advances Wernerfelt's (1984) proposition that while performance is driven directly through the firm's products or services, it is indirectly driven by the resources and capabilities in developing products or services. In examining performance outcomes, the literature suggests that performance differentials come from the creation of synergistic configurations of resources and capabilities (e.g. Murray *et al.*, 2011), such as marketing resources and their deployment (e.g. Sok *et al.*, 2016). These findings extend the current

EO-performance literature by drawing on the RBV assertion to highlight the importance of the marketing function in fully realizing the effect of EO on performance among small service firms. This is largely because small service firms seeking to realize the performance benefits of their EO need marketing resources to facilitate the development of marketing capability. These findings advance the contention raised by Sok *et al.* (2016) that small firms do not operate as resource-only or capability-only entities but as a combination of both. They also lend credence to the suggestion that EO provides small firms with the ability to utilize their marketing capabilities to pursue market opportunities more effectively than their competitors, leading to competitive advantage (Wiklund and Shepherd, 2003; Kollmann and Stöckmann, 2014), and marketing resources provide the necessary condition for this process to take place.

### *Managerial implications*

In light of our findings, some meaningful managerial implications can be drawn. The results of our study suggest that preserving the entrepreneurial spirit (being entrepreneurially oriented) is critical to progress in organizational development. Yet, having an EO itself is not sufficient to achieve superior performance. Small service firms must ensure that the EO philosophy is translated into actual entrepreneurial activities with an emphasis on the marketing function. Our study informs small business managers about the importance of harnessing marketing capability to fully realize the performance benefits of EO. This could be achieved by seeking assistance from professional business coaches. Second, the important role of marketing resources cannot be overlooked. Small firm managers must ensure that there are available resources (e.g. time, money and people) that can be invested in marketing-related activities, such as establishing and building personal relationships with customers through a combination of online and offline marketing. Investing in such marketing-related activities can help to not only maintain market share but also grow it. Given the resources – capability consuming nature of EO and since small service firms are known to be resources – capability poor entities, managers are strongly advised to cultivate social capital with people external to their firms (i.e., suppliers, competitors, customers, distributors, political figures). Personally reaching out to their contacts and staying in touch is important and sends a clear message that they are interested in maintaining these relationships for mutual benefits. External partners are good sources of information and resources for small service firms when in need. Specifically, a large number of network ties may also be helpful in preventing small service firms from making ineffective strategic decisions. Network ties facilitate sharing of critical information not known to the firms which can guide their strategic moves. Even harnessing networking can be time consuming and requires some effort, but the benefits will outweigh the costs for small service firms in both short and long terms.

### *Limitations and future directions*

Although our study provides new insights into the nature of the EO-performance relationship, we acknowledge a number of limitations and offer suggestions for future research. Our study focused on marketing capability and marketing resources as intermediate and contingency links between EO and performance. However, other salient organizational factors, such as innovation and organizational learning, could be incorporated into the conceptual model.

Limitations associated with the use of the self-report performance measures are also acknowledged. Even though we carefully constructed our measures to account for this issue, and common method variance is not an issue in this study, future research may seek objective performance indicators to test the robustness of our findings. The investigated relationships depend on the context and the measured perceptions reflect a single point in

time which makes this study no different from other studies that use a cross-sectional design (e.g. Gwinner *et al.*, 1998; Odekerken-Schröder *et al.*, 2003). Future research could focus on collecting longitudinal panel data to examine how the EO-performance relationship unfolds over time.

In addition, this study measured EO as a unidimensional construct. Despite its popularity and consistency with prior studies (e.g. Rauch *et al.*, 2009; Engelen *et al.*, 2015, 2016; Gupta and Batra, 2016), the adequacy of the instrument is not unchallenged. Given that some scholars suggest it is more beneficial to examine the individual dimensions of EO on outcomes (e.g. Kollmann and Stöckmann, 2014), future research may replicate this model and examine the effect of each EO dimension on performance through marketing capability.

Finally, previous research indicate that management practices differ between small and micro firms (Wincent, 2005; Liberman-Yaconi *et al.*, 2010). Although we controlled for firm size in our study focusing on small service firms, future research could examine how variations in performance differ across these sub-categorizations and how they can maintain this as they grow in size. This is particularly the case for small businesses given they are defined as businesses with less than 20 employees and include micro firms (one to four employees) and small firms (5-19 employees).

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	Factor loading
<i>Marketing resources (Coviello et al., 2006)</i>	
Our substantial amount of marketing resources (e.g. people, time, money) are invested in	
1. Promotion-related activities	0.80
2. Pricing-related activities	0.75
3. Distribution-related activities	0.79
4. Service development activities	0.80
5. Database technology to improve communication with our customers	0.77
6. Operational assets (e.g. IT, website)	0.67
7. Establishing and building personal relationships with individual customers	0.72
8. Developing our business network relationships with our markets or wider market	0.73
<i>Marketing capability (Chen et al., 1998; Vorhies and Morgan, 2005)</i>	
At this point in time (i.e. right now), how certain are you that your business can perform the following tasks:	
1. Promote the business	0.82
2. Set and meet sales goals	0.85
3. Set and attain profit goals	0.84
4. Establish position in the market	0.87
5. Conduct market analysis	0.80
6. Identify target market	0.79
<i>Entrepreneurial orientation (Covin and Slevin, 1989; George et al., 2001; Lumpkin et al., 2009)</i>	
Innovativeness	
1. Our business actively introduces improvements and innovations	0.88
2. Our business is creative in its methods of operations	0.92
3. Our business seeks out new ways to do things	0.91
Risk-taking	
4. The term "risk taker" is considered a positive attribute for people in our business	0.90
5. People in our business are encouraged to take calculated risks with new ideas	0.93
6. Our business emphasizes both exploration and experimentation for opportunities	0.86
Proactiveness	
7. We always try to take the initiative in every situation (e.g. against competitors)	0.83
8. We excel at identifying opportunities	0.90
9. We initiate actions to which other organizations respond	0.85
Competitive aggressiveness	
10. Our business is intensely competitive	0.85
11. In general, our business takes a bold or aggressive approach when competing	0.91
12. We try to out-do and out-maneuver the competition as best as we can	0.89
Autonomy	
13. Employees are encouraged to act and think without interference	0.89
14. Employees perform jobs that allow them to make and instigate changes in the way they perform their work tasks	0.91
15. Employees are given freedom and independence to decide on their own how to go about doing their work	0.93
16. Employees are given freedom to communicate without interference	0.94
17. Employees are given authority and responsibility to act alone if they think it to be in the best interests of the business	0.91
18. Employees have access to all vital information	0.79
<i>Performance (O'Casey and Sok, 2013; Gupta and Batra, 2016)</i>	
How the following measures performed relative to expectations during the past 12 months?	
1. Sales growth	0.84
2. Profit margin	0.84
3. Return on investment	0.78
4. Customer satisfaction	0.66
5. Customer retention/loyalty	0.76

**Table AI.**  
Scale, source, and  
items

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