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Configurations of entrepreneurial orientation and competitive strategy for high performance

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ABSTRACT

Entrepreneurial orientation (EO) – that is risk-taking, proactiveness and innovativeness – and Porter's generic competitive strategies have become core constructs within entrepreneurship and management research; still, little is known about how they act in combination to influence performance. A configurational view of contingency fit is used to craft a typology of three ideal types. A qualitative comparative analysis of 67 small firms in Sweden empirically supports the hypothesis that two ideal types are associated with high firm performance: one focuses on differentiation strategy combined with innovativeness and proactiveness; and one focuses on a mixed strategy with risk aversion, reactivity, and low innovativeness. The paper contributes to the current literature by showing how EO sub-dimensions in a non-linear way facilitate firm performance when in fit with competitive strategies, and supports the research stream that sees EO as a formative construct.

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1. Introduction

Several meta-studies point to the positive effect of entrepreneurial orientation (EO) on firm performance (Rauch, Wiklund, Lumpkin, & Frese, 2009; Saeed, Yousafzai, & Engelen, 2014), where EO captures the entrepreneurial practices of firms in the form of risk-taking, proactiveness, and innovativeness (Javalgi & Todd, 2011; Miller, 1983). Most EO research has been focused on the direct linear effect of EO on firm performance (Edmond & Wiklund, 2010; Wales, Gupta, & Mousa, 2013). However, several studies indicate that the direct linear relationship between EO and firm performance is an over-simplification that can be questioned (Andersén, 2010; Wiklund & Shepherd, 2005). For example, Patel, Kohtamäki, Parida, and Wincent (2015) conclude that EO, rather than increasing performance, increases variability in performances, insisting on more EO enhancing the odds on both big wins and big losses, thereby challenging the linearity of EO to firm performance (Wiklund & Shepherd, 2011).

Moreover, as firms hold different market positions, competitive strategies, and unique assets, the positive effect of EO on performance found in large samples does not reveal whether or not the EO postures are well-aligned with these other aspects of the firm. Wales et al. (2013) suggest that more knowledge on the causal mechanisms of how EO is aligned with other firm aspects is instrumental. While EO is generally accepted as a posture related to a firm's strategy-making efforts (Lumpkin & Dess, 1996), Porter's (1980) generic competitive strategies

describe alternative positions in the market that can give a firm a competitive edge: via differentiating itself to increase consumer value and thereby achieving better margins, or via lower costs than the competitors'. However, neither EO nor the strategy of choice might be sufficient to explain firm performance in isolation from one another (Eggers, Hansen, & Davis, 2011; Moreno & Casillas, 2008; Tang & Hull, 2012). Matching a firm's EO posture to its competitive strategy appropriately, however, might enhance the performance (Lechner & Gudmundsson, 2014). This is in line with recent articles on EO that call for research to examine EO in configurations with other aspects, such as strategy (Edmond & Wiklund, 2010; Kreiser & Davis, 2010; Miller, 2011; Wales et al., 2013). With a configurational view, it is possible to take the examination beyond the impact of single aspects and instead investigate bivariate and multivariate outcome (Drazin & Van de Ven, 1985). The basic assumption in the configurational view is that different aspects interrelate with each other and, therefore, some configurations are well aligned while others are not (Miller, 1996).

Furthermore, EO itself can be seen as a reflective construct (e.g. Miller, 1983) where the sub-dimensions are expected to covary, or as a formative construct (e.g. Avlonitis & Salavou, 2007; Lumpkin & Dess, 1996) where the sub-dimension can vary independently (Covin & Lumpkin, 2011; George & Marino, 2011). Kreiser and Davis (2010) take a formative view of EO in developing a typology that includes the EO sub-dimensions of risk-taking, proactiveness, and innovativeness as independent postures, without, however, empirically assessing the typology. Along the same lines, Lechner and Gudmundsson (2014) advocate the formative view when investigating the links from the EO sub-dimensions to competitive strategies, although without going beyond a mediation model.

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As argued, from a wider perspective, studies that explicitly investigate the important interplay between EO postures and firm-level competitive strategy are warranted. More specifically, the current research contributes to the EO literature in the following ways: firstly, by linking configurations of the EO sub-dimensions to competitive strategy, this study further extends configurational theory to the current EO literature. Uncovering particular configurations in contingency fit with better odds for high firm performance than alternative configurations, the findings demonstrate the fruitfulness of using a configurational approach to conceptualize interrelated dimensions as packages that are linked to performance as wholes, rather than as multiple individual firm qualities linked to performance separately. Secondly, the results add to the research stream that sees EO as a formative construct. The findings support the view that risk-taking, innovativeness, and proactiveness in fact are individual and distinct entrepreneurial postures.

2. Entrepreneurial orientation, strategy, and configuration theory

The underlying theoretical model in this paper builds on configuration theory (Miller, 1987, 1996) and the concept of contingency fit (Drazin & Van de Ven, 1985; Venkatraman, 1989). Configuration theory builds upon the idea that firms fall into a limited number of states of internal coherence among a collection of theoretical attributes. Because only a limited number of states of fit exist, firms need to make quick and fundamental changes (i.e. quantum jumps) to avoid in-between states (Drazin & Van de Ven, 1985; Meyer, Tsui, & Hinings, 1993; Miller, 1996). Theoretically derived configurations, also called typologies, can help researchers organize complex relationships into profound explanations (Fiss, 2011). Typologies are in essence neat and memorable while acting in coherence in interesting ways. The interdependencies among the theoretical attributes within a typology are the core of configurations (Boyd, Haynes, Hitt, Bergh, & Ketchen, 2012; Miller, 1996).

This study uses the configuration approach on small firms (e.g. Andersén, 2012; Scheepers, Verreynne, & Meyer, 2014) and applies the different dimensions of EO and competitive strategy as attributes in the configuration. Fit between the several different dimensions is assumed to be linked to higher performance in the firms. This study uses the most commonly used dimensions (Wales et al., 2013) of risk-taking, proactiveness and innovativeness for EO (Covin & Slevin, 1989; Miller, 1983). Following Lechner and Gudmundsson (2014), only the horizontal dimension, cost leadership to differentiation strategy, is used for competitive strategy.

To conceptualize how the different factors fit together, interrelate, and form configurations, the paper proceeds with a brief review of the literature on EO and competitive strategies, respectively.

2.1. Entrepreneurial orientation

The roots of entrepreneurial orientation are related to the fact that entrepreneurial firms are more inclined to take risks than other types of firms (Khandwalla, 1976; Mintzberg, 1973). Miller (1983) and Miller and Friesen (1983) elaborated upon this idea to include risk-taking, proactiveness, and innovativeness in the behavior of entrepreneurial firms. In EO, risk-taking is characterized by venturing into the unfamiliar with bold action, borrowing heavily, and committing substantial resources to ventures in ambiguous settings (Miller, 1983; Mousa, Wales, & Harper, 2015). Proactiveness is characterized by an opportunity-seeking and pioneering outlook that introduces new products and services before competitors and that also acts in anticipation of future demand (Abebe & Angriawan, 2014; Covin & Slevin, 1989). Innovativeness is characterized by strongly focusing on R&D, being a leader in technology, and introducing new products as well as changing existing products or service lines (Lumpkin & Dess, 1996; Mickiewicz, Sauka, & Stephan, 2014). However, from a configurational view, an important

consideration is that the opposite ends of the dimensions can also be beneficial characteristics depending on the context, for example, the competitive strategy (Covin, Slevin, & Covin, 1990).

As suggested above, EO has often been seen as a reflective and aggregated measurement (e.g. Covin & Slevin, 1989; Miller, 1983) of the three sub-dimensions. Nevertheless, later research has suggested the importance of also investigating the sub-dimensions of EO from a formative point of view because the individual dimensions may have differentiated relationships with other variables (Kreiser, Marino, Kuratko, & Weaver, 2013; Lumpkin & Dess, 1996). Similarly, Miller (2011) suggests that the EO sub-components can be more telling than the aggregated measure because the sub-dimensions can play different roles depending on the specific context. For example, innovativeness might be more crucial than risk-taking for a certain strategy and vice versa. Furthermore, EO has been suggested as being contingent upon the context and exhibiting different results depending on the context, for example strategy or environment (Covin & Slevin, 1991; Lumpkin & Dess, 1996). On this basis, the EO sub-dimensions and these contextual variables are suggested as needing to be *aligned* (proper fit) to achieve higher firm performance. Thus, EO would have different effects on firm performance depending on the context. In EO studies, the external environment has been a well-researched context; however, less focus has been directed toward the internal context (Rauch et al., 2009; Wales et al., 2013). This paper focuses on the internal context of competitive strategy.

2.2. Competitive strategy

Porter's (1980) model of competitive strategy is generally accepted although several other frameworks to classify strategies exist (e.g. Miller & Friesen, 1978; Miles & Snow, 1978). This study uses Porter's typology because of its wide acceptance in the literature (Allen & Helms, 2006; Hernández-Perlines, Moreno-García, & Yañez-Araque, 2016). Similarly to Lechner and Gudmundsson (2014) and Fiss (2011) who also use Porter's typology, the present study uses Porter's two main foundations of competitive advantage: differentiation and cost leadership. Differentiation is engaged in creating additional value by offering the customer a superior product and added value (Brenes, Montoya, & Ciravegna, 2014). Differentiation can meet customer demands in unique ways, such as product design, quality, speed and flexibility. In contrast, cost leadership is engaged in attaining low cost structures that in turn allow products to be offered at lower costs than those of competitors, for example, by achieving economies of scale or improving design for manufacturing (Martinez-Simarro, Devece, & Llopis-Albert, 2015). This allows the cost structure to be lowered, which in turn allows lower prices. Porter (1996) later opened up for the idea that a combination of cost-leadership and differentiation strategy might be possible, which many other authors agree with (e.g. Allen & Helms, 2006; Helms, Dibrell, & Wright, 1997; Jones & Butler, 1988; Miller & Dess, 1993). A mixed strategy has to balance offering traditional products but also offering new products mainly through imitation of the most successful new products offered by competitors (Helms et al., 1997).

2.3. A typology

Based on previous literature, we develop ideal types that are expected to lead to high performance. Centered on the three competitive strategies of differentiation, cost leadership, and a mixed strategy between differentiation and cost leadership, we theorize three ideal types. To start with, we connected each strategy with each EO sub-dimension, as summarized in Table 1. The literature review indicates, in essence, three different strategic types of firms; these are further elaborated below. Each type has its unique competitive strategy as well as EO sub-dimensions. These three ideal types are named based on their main function as follows: 'Organizers', 'Systematizers', and 'Evaluators'. Although other typologies are available (e.g. Miles & Snow, 1978;

Table 1
The relationship of EO sub-dimensions with competitive strategies.

	Cost leadership	Differentiation	Mixed strategy
Risk-taking	A cost leadership strategy can be associated with large upfront investments and require the managers to exhibit more risk-taking behavior (Porter, 1980). However, cost leadership is usually based on price competition, where the firm is already familiar with the market demand and therefore simply offering a similar product with low cost. Thus, the literature is not clear on how risk-taking fits with cost leadership.	On the one hand, differentiation strategy can be a way to control for risks, because of the reduction in initial investments and thereby fixed costs (Lechner & Gudmundsson, 2014). On the other hand, a differentiation strategy usually aims at developing unique products where customer demand is unknown, requiring risk-taking (Dess et al., 1997). Thus, the literature is not clear on how risk-taking fits with differentiation.	A mixed cost leadership and differentiation strategy may be a way to reduce risk-taking (Miles & Snow, 1978). The risk aspect of not knowing the market demand of completely new products can be reduced and competition with pure cost leaders is reduced. Thus, upfront investments are low and demand is known, which minimizes risk-taking.
Proactiveness	As the target customer of a cost leader strategy is mainly interested in low price, the predictability of demand is more stable and easier to forecast (Dess et al., 1997; Miller, 1988). Thus, proactiveness is not as important for cost leadership.	Differentiation builds upon superior products, such as design and value-added benefits (Porter, 1980). Therefore, managers need to be proactive and have a clear understanding of customer preferences (Dess et al., 1997).	A mixed strategy is about being a follower and fulfilling already known customer wants. These firms do not need to anticipate future demands; rather they react to current demands. Hence, a mixed strategy will fit better with reactivity than proactiveness.
Innovativeness	Cost leadership is usually characterized by minimization of R&D because the targeted customers are more interested in price than novelty and product image. Hence, innovativeness does not fit with a cost leadership strategy (Miller, 1988).	For a firm to be able to offer a differentiated product, the firm must rely heavily upon product innovativeness to be able to deliver value-added products to customers at premium price points (Porter, 1980).	A mixed strategy of cost leadership and differentiation does not focus on novelty and innovation. By focusing on imitation rather than innovation, a mixed strategy can enable a firm to renew its product line without incurring vast R&D costs (Miles & Snow, 1978)

Miller, 1983; Mintzberg, 1973), our typology is unique in focusing on the dynamic interactions, or fit, between the EO sub-dimensions and the competitive strategies. The ideal types are further elaborated below and illustrated in Table 2. This paper uses illustrative tables that are similar to those of Fiss (2011), which use white crossed out (○) circles to indicate the absence of a condition and black filled circles (●) to indicate the presence of a condition.

2.3.1. Originalizers

Table 2 illustrates the ideal type of Originalizers. These firms operate on the basis of providing the latest and specialized offerings to customers through innovation, hence the name Originalizers. Differentiation strategy is the clear choice over cost leadership since Originalizers want to meet demands in unique ways. The aim is to offer customers value-added benefits and custom products or services while cost is less important. As illustrated in Table 2, Originalizers can either be risk-takers or be risk-averse. As a differentiation strategy calls for continuous adaptation where the investments can be staged and thereby afford the firm more flexibility, this in turn reduces the risk (Lechner & Gudmundsson, 2014). On the other hand, a differentiation strategy usually aims at developing unique products where customer demand is unknown, which may be an ambiguous setting. Thus, to invest in something where the demand and return are unknown can be risky (Lumpkin & Dess, 1996). Therefore, Originalizers can either be risk-takers as they have to take market-related risks or they can be risk-averse because they do not have to make large investments in standardization. Originalizers' strategy of differentiation requires that the managers are proactive and have a clear understanding of customer preferences and the competing products available to them, since the

customers have to be willing to value and pay a price premium for the unique product features. Furthermore, customers looking for superior quality and design will increase the unpredictability and quickly changing nature of buying patterns (Miller, 1988). Proactiveness is also supposed to increase first-mover advantages (Hughes & Morgan, 2007). Therefore, proactiveness is required for Originalizers. Moreover, the innovativeness dimension in EO focuses more on product innovation than on process innovation (Lechner & Gudmundsson, 2014). This is because the operationalization of EO is often performed with the Covin and Slevin (1989) scale which clearly favors product innovativeness over process innovativeness. Differentiation strategy, central to Originalizers, is about offering the customer unique value by, for example, superior design, high quality products, and unique solutions. For a firm to be able to offer this, it must rely heavily upon product innovativeness to be able to deliver value-added products to customers at premium price points (Porter, 1980). Innovativeness has also been argued to be the driving force behind a differentiation strategy (Gatignon & Xuereb, 1997), and therefore assumed to fit well with Originalizers. Moreover, since innovativeness focuses on technological leadership and changes in products and services, this is a feature that fits perfectly with proactiveness (Anderson, Kreiser, Kuratko, Hornsby, & Eshima, 2015; Rosenbusch, Brinckmann, & Bausch, 2011), which initiates actions that competitors have to respond to, which in turn is expected to lead to beneficial interaction effects. Therefore, Originalizers are expected to have considerable synergy effects among differentiation strategy, innovativeness, and proactiveness.

2.3.2. Systematizers

The next column in Table 2 shows Systematizers. These firms operate on the basis of providing standardized and low cost offerings to customers through systematization, hence the name Systematizers. Cost leadership is the distinct choice of strategy over differentiation since Systematizers focus on cost reduction and efficiencies. A cost leadership strategy can be associated with large upfront investments in such areas as technology and equipment (Porter, 1980). Cost leadership is based on efficiencies and standardized processes, which reduces the flexibility of the firm (Miller, 1988). These higher investments require the managers to exhibit more risk-taking behavior. From an investment perspective, cost leadership requires, supposedly, risk-taking (Lechner & Gudmundsson, 2014). However, cost leadership is usually based on price competition, where the firm is already familiar with the market demand and is therefore simply offering a similar product at a lower cost. And even though the firm needs to make large investments, the

Table 2
Ideal profiles.

	Typology		
	Originalizers	Systematizers	Evaluators
Cost leadership	○	●	●
Differentiation	●	○	●
Risk-taking	●/○	●/○	○
Proactiveness	●	○	○
Innovativeness	●	○	○

White crossed out (○) circles indicate the absence of a condition and black filled circles (●) indicate the presence of a condition.

market demand is roughly known, and the risk-taking from a market point of view is low. Thus, Systematizers can be risk-taking or risk-averse.

Proactiveness might to some extent also be needed for Systematizers when initial large investments are needed, for example, IT systems. These fixed costs are long-term commitments that are not easily changed. However, once this initial investment is made, fewer options are available to choose from since low-cost strategies require standardized and stable processes. As the target customer of a cost leader strategy is mainly interested in low price, the predictability of demand is more stable and easier to forecast (Miller, 1988). Proactiveness is more about a pioneer outlook and introducing products ahead of competition, and less about efficiencies and fulfilling already existing customer demands (Hughes & Morgan, 2007). As portrayed in Table 2, the literature concludes that Systematizers do not fit with proactiveness, but rather with reactivity since Systematizers do not aim at being first movers or having a pioneering outlook.

Moving on, innovativeness is also needed, but only to a certain degree, to be able to achieve the low cost structure which is needed for Systematizers. However, cost leadership is focused on process innovation (Porter, 1980), which is not the main innovativeness feature in EO. Again, the operationalization with the Covin and Slevin (1989) scale favors product innovativeness. Cost leadership is usually characterized by minimization of R&D because the targeted customers are more interested in price than novelty and product image. For Systematizers, tried-and-true products and services are in focus to keep costs at a minimum. Hence, innovativeness does not fit with a cost leadership strategy (Miller, 1988). Moreover, reactivity can benefit from low innovativeness, such as imitation, as the reaction can be imitated rather than innovated which will be more resource-efficient. Therefore, Systematizers are expected to have beneficial interaction effects among cost leadership, low innovativeness, and low proactiveness.

2.3.3. Evaluators

The last column of Table 2 illustrates Evaluators. These firms operate on the basis of providing apparent successful offerings to customers. To achieve this, competitors' products and services offered to customers need to be evaluated, hence the name Evaluators. A mixed strategy of cost leadership and differentiation is achieved through a balancing act (Helms et al., 1997). A distinct difference from Systematizers and Originalizers is the focus of Evaluators on risk aversion, which is achieved with the mixed strategy (Miles & Snow, 1978). By not being a perfect differentiator, the risk aspect of not knowing the market demand for completely new products can be reduced. Instead, products already introduced and proven on the market can be adopted by firms with a mixed strategy. At the same time, Evaluators, with a mixed strategy, do not have the same demands as those that have a strategy of pure cost leadership (Jones & Butler, 1988). Consequently, there is not the same need for as large upfront investments for a mixed strategy as for a cost leader, since a cost leader needs standardization. Hence, a mixed strategy may be a good fit with risk aversion.

Evaluators are not about introducing products ahead of competition. Rather, their mixed strategy is about being a follower or imitator and fulfilling already known customer wants, although adopting these earlier than pure cost leaders. These firms do not need to anticipate future demands, rather they react to current demands. Hence, a mixed strategy will fit better with reactivity than proactiveness. Moreover, by focusing on imitation rather than innovation, a mixed strategy can enable a firm to renew its product line without incurring vast R&D costs (Miles & Snow, 1978). Therefore, Evaluators are expected to have beneficial interaction effects among a mixed strategy, risk-aversion, reactivity and imitation.

3. Data and method

This section starts with a report of the data and measures. The section then continues by elaborating on the method used, the analytical procedure and calibration.

3.1. Data

Broad samples are usually related to differences in unobservable factors and EO research has been urged to use more homogenous samples (Wiklund & Shepherd, 2011). In a similar vein, Miller (2011) suggests that EO researchers should use a precisely defined industry to control for many different contexts that can vary among industry sectors and national borders. As a response to these calls, the sample used in this study comprises one narrow sector in Sweden. With a population of 9.6 million people and a small geographical area, the firms are facing a more or less similar environment. The researchers were presented with a unique opportunity to sample the sector of sporting goods retailing together with the assistance from the sporting goods retailing association Svenskt Sportforum and the sector's magazine Sportfack. In total, 310 independent sporting goods retailers in Sweden were identified. This list is assumingly very close to a complete list of independent sporting goods retailers in Sweden. The authors assume that these independent retailers, who are not part of retail chains, are free to choose their own competitive strategy and are in control of the processes, structures and behaviors of the firm. The sporting goods sector in Sweden is dominated by a few large big box retailers such as Stadium, Intersport, and XXL and besides that many but often smaller independent stores, usually also more specialized in niche segments.

This study is based on complete data from 67 firms. Of the 310 retailers, firms that were listed as wholesale, department stores, and firms acting primarily as rental companies (e.g. ski and bike rental) were first excluded. Thereafter, the remaining 292 firms were approached by email to complete a survey. Of these, about 50% of the firms belong to loosely bonded purchasing groups; however, these purchasing groups do not limit the firms in choosing what products to sell, where to buy their products, or how they market themselves. A cover letter accompanied by the questionnaire was e-mailed out in April–June, 2014. The questionnaire was addressed to the CEO or top manager of the firm. 91 firms replied to the survey. This provided a response rate of 31%. Of those responses, 10 were filled out incompletely or obviously incorrectly, giving the same answer to all questions. When collecting the financial performance data, the sample had to be further reduced as eight firms did not have the legal status that requires public reporting, four firms had not yet reported their first full year, and for two firms operating in multiple sectors, results from sporting goods retailing were not possible to separate from the overall financial results.

3.2. Explanatory measures

We assessed competitive strategy using the two variables of cost leadership and differentiation, which are based on Porter's (1980) original definition but adapted to a sales context (Spanos & Lioukas, 2001) with a 7-point Likert scale. The sub-dimensions of EO were measured with the Miller (1983) and Covin and Slevin (1989) scale, which is the most commonly used EO scale (Covin & Wales, 2012). The scales show acceptable reliability; see Table 4 which reports reliability and descriptive data.

3.3. Outcome measure

It has been suggested that objective performance data be used, especially for entrepreneurial orientation and performance relationship. This is because entrepreneurial managers might have an overly optimistic outlook on their own performance and therefore "entrepreneurial" managers will answer high on both EO and performance (Andersén,

2010); this is also known as common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To overcome this, secondary reported financial data were used; performance is assessed as profitability (e.g. Antoncic, 2006; Miller & Toulouse, 1986) and measured as profit margin (EBIT) above zero over the last four years (2010–2013).

3.4. Analytical procedure

The present study takes a set-theoretic approach based on qualitative comparison analysis (QCA) in this study. Centered on set theory, QCA supports analysis of how different explanatory attributes together combine to a specific outcome (Fiss, 2011; Rey-Martí, Tur Porcar, & Mas-Tur, 2015). Because QCA can handle high levels of causal complexity, the method is exceptionally well suited to study configurations (Fiss, 2007, 2011; Grandori & Furnari, 2008; Mas-Verdú, Ribeiro-Soriano, & Roig-Tierno, 2015; Woodside, 2012, 2013). QCA is based on John Stuart Mill's (1843) "method of difference" and "method of agreement" in which patterns are analyzed to understand the cause and outcome. In this way, the researcher is able to take away attributes that are unconnected to the outcome. QCA can examine what configuration of attributes leads to high performance by scrutinizing high performing firms and then pinpointing combinations of attributes related to these high performing firms. This process is enabled by using Boolean algebra and algorithms which are able to reduce the complex causal conditions to configurations that are connected to the outcome (Fiss, 2011).

QCA's systematic approach to cross-comparing cases is useful for 10 or more cases (Rihoux & Ragin, 2009) and was invented by Ragin (1987) to allow for small-n cross-comparative studies of countries in political science. However, more recently QCA has been extended to become a medium and large-N approach (see e.g. Ragin & Fiss, 2008). A main difference from traditional statistical methods is that QCA allows researchers to achieve logical analysis where variables do not compete to explain the outcome (Greckhamer, 2011; Kent & Argouslidis, 2005). Based on Boolean algebra, QCA was at first only able to handle dichotomous values. To overcome this limitation, the method has been developed to also integrate continuous variables by using fuzzy sets (Fiss, 2007; Ragin, 2008). Fuzzy sets thus allow the researcher to specify more precisely the level of an attribute.

There are three main steps in conducting a QCA analysis. The first step is to produce a truth table with the explanatory measures as columns (K) and rows represent a possible combination of attributes. In addition, an outcome column is added. The number of rows should be 2^k and therefore be able to list all possible combinations. The study has five explanatory measures and, thus, 32 possible combinations. Then each case is sorted into the rows of the truth table depending on the value of the explanatory measures. Naturally, some rows will contain many cases and some rows will contain no cases.

The second step requires the researcher to make two decisions. The first decision relates to the minimum number of cases that need to fall into a row in order to be included in the analysis. Configurations that only consist of 1 or 0 cases are removed, in line with Ragin's (2008) recommendations. The minimum number of cases in this study is set to 2, which removes 12 cases and still leaves 82% of the cases in the analysis. The second decision deals with the minimum level of consistency for a configuration. Consistency is similar to correlation in statistical analysis (Wu, Yeh, Huan, & Woodside, 2014) and can be explained as the degree to which a specified configuration shows the desired outcome, in this case high performance. Moreover, the minimum level of consistency is set at 0.75 which is the recommended level (Ragin, 2006, 2008). Table 2 presents the reduced truth table, which has 15 rows and six of these rows reach a consistency level over 0.75. The top six rows are assigned as the high performance configurations for further analysis.

The third step uses the Quine-McClusky algorithm, which is based on Boolean algebra and is used to reduce the truth table rows into simplified solutions. A solution is in QCA terms a sufficient path to the desired outcome; a solution can contain one or several condition(s) that

either have to be present or absent. For each solution, the algorithm helps sort out core and peripheral explanatory conditions (Fiss, 2011), in which the core conditions are unambiguously part of the solution, and the peripheral – based on the sample analyzed – are seemingly necessary parts too, although it cannot be ruled out that the latter is a redundant condition that, with more data, can be dropped.

3.5. Calibration of measures

QCA requires measures to be transformed into membership scores between 0 and 1, where 1 means full membership, and 0 means full non-membership. The researcher needs to decide at what level a measure would be considered full non-member, full member, and the cross-over point where maximum uncertainty exists of membership or non-membership (Rihoux & Ragin, 2009). This paper uses consistent calibration rules for the explanatory conditions. Since the study is of an exploratory nature, a relative scale is used where the cross-over point is set to the median, and full membership and full non-membership are set to the 10th percentile and the 90th percentile respectively (see e.g. Tóth, Thiesbrummel, Henneberg, & Naudé, 2015).

For the outcome measure, profit margin is used. Profit margin is calibrated into four zones: no performance, medium performance, medium/high performance, and high performance. The low performance zone is set to anything below 0% and a value of full non-membership since anything below 0% would be losing money and thus considered as no performance. The next zone between 0% and the median value of 2.8% is set to 0.6 membership because the firm is performing and making a profit, thereby being more in than out of the performance measure; however, this performance is only somewhat normal, hence the value of 0.6. The medium/high zone was set between the median and the top 25th percentile of 5.4% and a value of 0.8. The high performance zone was set to anything above the top 25th percentile and a value of full membership.

4. Results

Table 3 presents the truth table, Table 4 presents correlations for all measures, and Table 5 presents reliability and descriptive statistics.

Table 6, the solution table, shows the results of the fsQCA analysis with profit margin as the outcome measure. Accordingly, three alternative solutions were found that with acceptable consistency (≤ 0.75) corresponded to performance; in other words, each one of these three combinations of conditions is seemingly likely to facilitate performance.

In Table 6, 'overall solution coverage' reports which share of the outcome is covered by the three sufficient alternative solutions combined, while 'raw coverage' reports which percentage of the outcome is covered by the individual solution, and 'unique coverage' reports which percentage of the outcome is uniquely covered by the individual solution (Ragin, 2008). Consistency measures reports (for each individual solution as well as the three solutions combined) the fit between the solution(s) and the outcome (Ragin, 2008). Our results indicate strong coverage and consistency in both the individual solutions and the overall solution, in line with previous research (cf. Fiss, 2011).

Solution 1 indicates that a combination of differentiation strategy, innovativeness, and proactiveness is related to high performance; this solution corresponds with the ideal type of Originalizers. The solution does not give a clear answer to whether risk-taking should be present or absent, which is in line with Originalizers. The only difference from Originalizers is that the absence of cost leadership strategy is not a necessity. Present in this solution are both proactiveness and innovativeness, which have been suggested as being closely related within EO (Lumpkin & Dess, 1996).

Solution 2 indicates that differentiation and proactiveness are present while risk-taking and cost leadership are not. This solution also fits closely with our Originalizers. In this solution, the difference from Originalizers is that innovativeness is not necessary while risk-taking

Table 3
Truth table.

Configuration	Cost leadership	Differentiation	Risktaking	Innovativeness	Proactiveness	n	Performance	Consistency
1	●	●	○	●	●	3	1	0.82
2	○	●	●	●	●	5	1	0.80
3	○	●	○	●	●	2	1	0.80
4	●	●	●	●	●	10	1	0.80
5	○	●	○	●	○	2	1	0.77
6	●	●	○	○	○	2	1	0.76
7	○	○	○	●	●	2	0	0.74
8	●	●	●	●	○	2	0	0.72
9	●	○	●	●	●	6	0	0.71
10	○	○	●	●	●	3	0	0.69
11	●	○	○	○	○	3	0	0.68
12	○	○	●	●	○	2	0	0.66
13	○	○	○	○	○	7	0	0.66
14	●	○	○	●	○	2	0	0.64
15	○	○	●	○	○	3	0	0.63

Note: The frequency cutoff point was 2, while the consistency cutoff point was 0.75. White crossed out (○) circles indicate the absence of a condition and black filled circles (●) indicate the presence of a condition.

is indicated as not present. Note that even though solutions 1 and 2 are both similar to Originalizers, the differences between the conditions are noteworthy. In solution 1, risk-taking and cost leadership are not necessarily present or absent, while in solution 2, risk-taking and cost leadership are absent while innovativeness is not necessarily present or absent. This finding highlights QCA's ability to explain internal relationships within configurations (Fiss, 2011). In this case, two distinct configurations that both adhere closely to Originalizers are found.

Solution 3 indicates the presence of our theorized Evaluator type. In this solution, a combination is visible of differentiation and cost leadership as the competitive strategy, while all three sub-dimensions of EO, risk-taking, proactiveness, and innovativeness, are absent. This solution fits perfectly with the Evaluator type and this finding adds additional support for the studies that indicate the presence of a successful mixed strategy (e.g. Fiss, 2011; Kabanoff & Brown, 2008). Most EO research has connected higher EO with better results (e.g. Rauch et al., 2009; Saeed et al., 2014); however, the results with this solution support the idea that an entrepreneurial orientation is not necessary for high performance (Andersén, 2010). The results are instead in line with Kask and Linton's (2013) study of EO in configurations which also find that low EO can lead to favorable results.

The results thus suggest the presence of Originalizers with solution 1 and solution 2, and the presence of Evaluators were identified with solution 3. However, the results did not reveal the presence of the ideal type Systematizers. The results also show that all three solutions have differentiation strategy as a necessary condition, indicating that some degree of differentiation is necessary for high performance. One plausible explanation for these unexpected results is that differentiation strategy is an important factor for small retailers. A cost leadership strategy usually requires large investments in equipment, for example, to achieve economies of scale. This might not be suitable for small retailers who usually have resource constraints (Borch, Huse, & Senneseth, 1999; Wright, 1987). A common way for small retailers to compete with large incumbents is by offering personal relationships, flexible solutions, and superior service.

Table 4
Correlation matrix.

Conditions	1	2	3	4	5	6
Performance	1					
Cost leadership	0.02	1				
Differentiation	-0.01	0.11	1			
Risk-taking	-0.09	0.31*	0.13	1		
Proactiveness	0.27*	0.08	0.23*	0.33*	1	
Innovativeness	0.18	0.40*	0.30*	0.46*	0.68*	1

* Significant correlation at 0.05 level.

An additional noteworthy finding is that none of the solutions include the presence of risk-taking. Thus, the results indicate that risk-taking is not necessarily favorable; this warrants further investigation of risk-taking in EO (in line with Miller, 2011; Wiklund & Shepherd, 2011). Furthermore, risk-taking has been found not to be as closely related to the other EO dimensions (Reijonen, Tammi, & Saastamoinen, 2014).

4.1. Sensitivity analyses

Several sensitivity and robustness analyses were carried out (see e.g. Fiss, 2011; Kask & Linton, 2013). First, the calibration of the explanatory conditions was varied from the 5th and the 95th percentile respectively to the 20th and the 80th percentile respectively without any major differences in the solutions. In addition, the outcome measure was coded as a crisp outcome, that is, all profitable firms were coded as successful and all non-profitable firms were coded as unsuccessful. This did not result in any major differences in the solutions. Furthermore, the cutoff consistency level of the truth table is fluctuated. Bringing the consistency level up to 0.79 resulted in only solution 1. This might indicate that this is the most stable solution; nonetheless, solutions 2 and 3 are still within the accepted consistency levels. The frequency cutoff was also assessed at the 1 frequency cutoff without any major changes to the solutions. Lastly, an analysis with the performance measure reversed was executed in search of low performance, but without finding any clear results or similar solutions to our high performance solutions.

5. Conclusions

The aim of the paper is to develop and expand theories of the ability of the EO sub-dimensions to act in unique combinations with each other, as well as, with competitive strategy, in the form of differentiation and cost leadership. Beyond this, the paper provides a typology of three ideal types assumingly leading to contingency fit, which in turn would lead to high performance. The empirical findings indicate, indeed, that

Table 5
Reliability and descriptive statistics.

Condition	Mean	Std. dev.	α
Cost leadership	4.53	1.07	0.65
Differentiation	6.31	0.60	0.70
Risk-taking	3.13	1.23	0.79
Proactiveness	3.69	1.72	0.90
Innovativeness	3.25	1.42	0.83
Performance	0.01	0.10	
Age	24.36	27.04	
Size	4.24	7.61	

Table 6
Solutions.

	1	2	3
Cost leadership		○	●
Differentiation	●	●	●
Risk-taking		○	○
Proactiveness	●	●	○
Innovativeness	●		○
Raw coverage	0.41	0.22	0.17
Unique coverage	0.20	0.02	0.06
Consistency	0.81	0.80	0.77
Overall solution coverage	0.50		
Overall solution consistency	0.81		

White crossed out (○) circles indicate the absence of a condition and black filled circles (●) indicate the presence of a condition. Large circles are core conditions while small are peripheral.

three viable sufficient solutions related to high firm performance exist. Two of the sufficient solutions closely reassembled the theorized 'Originalizers', which focuses on differentiation in combination with innovativeness and proactiveness, and the third sufficient solution closely resembled the theorized 'Evaluators', which focuses on a mixed strategy with risk aversion, reactivity, and low innovativeness. However, the theorized 'Systematizers' focuses on cost leadership in combination with reactivity and low innovativeness is not present in the empirical analysis.

From a wider perspective, this study responds to the urgent call for more research that focuses on the interplay between EO postures and competitive strategy, by providing insight into how these aspects combine and in a joint effort affect firm performance. The results lend support to the notion that alignment between EO and competitive strategy is a central concern for performance as suggested by Lechner and Gudmundsson (2014) as well as Moreno and Casillas (2008). More specifically, the current research makes two primary contributions to the EO literature.

First, this study demonstrates the meaning and usefulness of extending configuration theory to EO research in order to give a fine-grained view of EO as suggested by Miller (2011) and Short, Payne, and Ketchen (2008). This study not only develops a typology, but also empirically investigates this typology using fsQCA in detecting configurations linked to high performance. The examination of the EO profiles and competitive strategy sheds light and offers a fine-grained view of the multi-dimensional linkages that can lead to high performance. In doing so, it supports research that challenges EO being directly related to performance (in line with e.g. Andersén, 2010; Patel et al., 2015). Previous research (e.g. Lechner & Gudmundsson, 2014) on EO sub-dimensions and competitive strategy has suggested a linear model of EO - competitive strategy - performance indicating an interplay between EO and competitive strategy but unable to explain how the factors combine to affect performance. The results from this study demonstrate empirical support for the configurational nature of EO's sub-dimensions, which is in line with the ideas of Miller (2011). The study also offers support for Kreiser and Davis (2010), who suggest that the sub-dimensions of EO may have varied relationships with performance which depend on the configurational setting that the sub-dimensions are situated in.

Second, by using the sub-dimensions of EO in a configurational framework, the findings here support the notion that risk-taking, innovativeness, and proactiveness are individual and distinct entrepreneurial postures. These three EO sub-dimensions are also demonstrated as having unique interactions in the context of competitive strategy. It was found that in combination with specific EO dimensions it may be fruitful to mix competitive strategies. This is in contrast to the findings of Lechner and Gudmundsson (2014) and Thornhill and White (2007), who do not use a configurational approach and rule out the possibility of mixing competitive strategies. Moreover, the finding of a

sufficient solution that consists of differentiation in combination with proactiveness and innovativeness, as well as another solution that consists of differentiation and proactiveness without risk-taking or cost leadership, indicate that unique EO sub-dimensions might be present at the same time as other EO sub-dimensions are absent. This is a clear indication that the EO construct seen as a formative construct can give us a more complete understanding of the EO construct (e.g. Lumpkin & Dess, 1996; Riviezzo, Napolitano, & Garofano, 2013). Despite tremendous advances having been made with EO as a reflective construct, this study suggests that further insight into EO as a formative construct may also be a fruitful way forward for EO research. Hence, a formative view can give us a more fine-grained understanding of entrepreneurial orientation.

For firm managers, the results reveal that there are several combinations of EO postures and strategy that can lead to high performance. It is not about developing a particular set of EO postures or one competitive strategy being better than the alternatives, but rather about combining the specific EO postures of the firm with the best fitting competitive strategy. In other words, firms should not necessarily aim at being more entrepreneurial overall but instead focus on the specific dimension of entrepreneurship that fits with their strategy, or adapt a competitive strategy that matches their particular EO profile. For small retailing firms, differentiation strategy seems to be a necessary strategy to pursue, either by itself or in combination with cost leadership depending on their different entrepreneurial conditions.

In the future, research that continues to develop the understanding of the individual EO dimensions from a formative view is encouraged. Continued EO research to use configurational models of different types is also encouraged. In the current EO research, the importance of internal context is urged (Wales et al., 2013), but the number of additional variables that traditional unidirectional and linear approaches can handle is limited. Hence, the configurational approach seemingly is a way beyond the impact of single aspects thanks to its ability to handle multiple dimensions where proper fit and synergies, rather than the presence or absence of single qualities, influence the outcome. This more holistic methodology has the potential to contextualize and enrich individual results from multiple studies while integrating results into a configurative model.

The present study has several limitations. First, the small firm sample is representative of the sporting goods retailing industry, which limits the generalization of the findings to small firms in other industries. Second, this study assumes that the environmental differences between the small firms are minimal for the sampled firms, in this study controlled by studying only one industry. A more complex model would include both the internal and external context of the firms, which would be desirable for future studies. Third, the findings draw on a single study. The robustness of the results from this research, therefore, needs replication studies.

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