

Composition, Dimensional Issue and Nature of Entrepreneurial Orientation (EO) Construct

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ABSTRACT

Entrepreneurship is considered as an important driver of economic growth, new firm creation, business rejuvenation & job creation. Over a period of time research within entrepreneurship literature has shifted from entrepreneur and his personality to his behavioral disposition. This has led to emergence of entrepreneurial orientation (EO) construct, which focuses on the process of entrepreneurship at firm level and it has emerged as the most widely researched area within entrepreneurship field. Though research in this field has been rigorous and exhaustive, still there have been concerns that researchers might have prematurely agreed on the composition, dimensionality, and nature of EO Construct. There has been considerable debate about whether EO Construct comprises three or five dimensions, about co-variance or independence of these dimensions and nature of construct whether formative or reflective. This article builds an argument about the multidimensional nature of EO construct comprising five dimensions, which vary independently and the fact that EO is better explained through formative construct rather than reflective one.

KEYWORDS

Entrepreneurial Orientation • Composition & Dimensional Nature • Formative or Reflective Construct.

1. INTRODUCTION

Entrepreneurship has been receiving increased attention of governments, policy-makers and researchers as it is considered as the harbinger of economic growth and employment generation. Though entrepreneurship has been defined in many ways, still a single uniformly agreed upon definition is yet to emerge. Increasingly entrepreneurship means making a 'new entry' either by starting a new venture or through launching new products/services or entering new markets by an existing venture. While entrepreneurship talks about making a 'new entry', the process of making new entry is defined as entrepreneurial orientation (EO). Within the field of entrepreneurship, the focus of research has shifted to the process of making new entry by firms, which talks about manners, techniques, and decision-making approaches used to act entrepreneurially. Miller (1983) articulated EO as a pattern of firm behaviour comprising three dimensions of innovativeness, risk-taking, and pro-activeness and argued that only when a firm regularly undertakes innovative endeavors, at considerable risk, ahead of its competition, should it be considered entrepreneurial. Covin and Slevin (1989) suggested that firm's entrepreneurial behaviour can be best captured by summing up "the extent to which top managers are inclined to take business-related risks (risk-taking), favor change and innovate (innovativeness), and compete proactively with other firms (pro-activeness) to obtain competitive advantage for their firm." They argued for the aggregation of three dimensions of EO into a unidimensional construct, stating that if firm performs high on one dimension, like innovation, there is every possibility that it will score high on all other dimensions. Most researchers have adopted EO as a construct comprising three dimensions of innovativeness, pro-activeness and risk-taking, which co-vary rather than acting independently.

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Thus firms are either categorized as entrepreneurial if they exhibit high levels of innovativeness, pro-activeness and risk-taking or conservative, if they exhibit low levels of any of the three dimensions.

While literature in EO stream has been devoid of any major theoretical or methodological controversies, some researchers raised concerns regarding the composition and dimensional nature of EO Construct, whether it is represented by three or five dimensions and whether the dimensions co-vary or act independently (Knight, 1997; Lumpkin and Dess, 1996; Zahra, 1993) and about the nature of EO Construct (Covin & Wales, 2012; George, 2011). Based on extensive literature review, Lumpkin and Dess (1996) argued that the formulation that EO comprises three dimensions was not comprehensive and it should include two additional dimensions of competitive aggressiveness and autonomy and EO dimensions vary independently rather than co-varying. Emerging research in this field indicates ambiguity about how the EO dimensions relate to the overall construct, i.e. reflective or formative construct, as most empirical studies on EO have consistently examined it as a reflective model regardless of conceptual and theoretical clarity. George (2011) hinted at the ongoing debate in EO literature regarding the dimensionality issue as whether the dimensions co-vary or act independently and argued that the answer to this question should be seen through the lens of nature of EO Construct itself as to whether it is a reflective one or formative one as it will automatically answer the dimensional nature of EO Construct. So researchers might have prematurely agreed on a common measure without establishing its composition, co-variance or its psychometric properties (Zahra, Jennings, & Kuratko, 1999).

Of late there have been studies (eg. Krieser et al., 2002, Stetz et al., 2000 and Hughes & Morgan, 2007), which have empirically examined EO as a multidimensional construct where the dimensions vary independently. This has resulted in a situation where individual studies have examined EO Construct as comprising of three/ five dimensions put together in a uni-dimensional construct where the dimensions co-vary or in a multi-dimensional construct where the dimensions vary independently and this has hampered the theory building process in this field. Miller (2011) while reflecting about the evolution of EO in the last three decades highlighted these ambiguities and underlined the need to examine the multidimensional nature of EO Construct comprising five dimensions rather than three, which vary independently rather than co-varying. The current article reviews the construct of EO in terms of its composition i.e. number of dimensions, issue of co-variance/independence of these dimensions and the nature of EO Construct to develop better understanding of the principal issues involved.

2. THEORETICAL FOUNDATION

2.1. ENTREPRENEURIAL ORIENTATION (EO) CONSTRUCT

The construct of entrepreneurial orientation has its roots in the work of Mintzberg (1973) and Khandwalla (1977), but it was Miller (1983) who first mentioned firm level entrepreneurship though he never used the term entrepreneurial orientation. Miller (1983) focused on entrepreneurship as a firm level process rather than the individual entrepreneur behind it by highlighting the role of innovativeness, risk-taking and pro-activeness as the key dimensions, which make a firm entrepreneurial. He characterized an entrepreneurial firm as “one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch.” Covin and Slevin (1989) further argued for the aggregation of three dimensions of EO, stating that these comprise a basic, uni-dimensional strategic & entrepreneurial orientation (EO) construct. Thus, the foundation of firm level entrepreneurship was laid, with key elements of innovativeness, risk taking and pro-activeness. These three dimensions aggregate together and form the Entrepreneurial Orientation (EO) Construct, which reflect a firm’s propensity to engage in entrepreneurial behaviour (Covin and Slevin, 1989; Dess et al., 1997). Researchers view EO as an organizational-level phenomenon and it has become a central construct in entrepreneurship research, with most of extant literature highlighting a positive relationship between EO and firm performance. Covin & Lumpkin (2011) as well as Wales, Gupta & Mousa (2011) while reviewing the existing literature in the field of EO have highlighted some of the concerns about EO Construct and its manifestations. Covin & Miller (2014) has highlighted the emergence of two dominant perspectives on EO; one viewing it as a composite construct comprising three dimensions and the other viewing it as a multidimensional construct comprising five dimensions.

2.2. DIMENSIONS OF EO CONSTRUCT

Based on Miller’s (1983) formulation, most researchers have considered EO as a construct comprising three dimensions of innovativeness, pro-activeness and risk-taking. In their seminal work, Lumpkin and Dess (1996) argued that the three dimensions do not sufficiently capture the field of firm-level entrepreneurial processes. Drawing on past literature they suggested the addition of competitive aggressiveness and autonomy to the existing three dimensions of EO construct. They argued that entrepreneurial firms and start-ups are keenly concerned with opportunities and

threats in the external environment because it support or limit their success. The pro-activeness component of EO captures entrepreneurial response to opportunities whereas competitive aggressiveness represents how firm responds to threats. Competitive Aggressiveness describes Miller's idea (1983) of "beating competitors to the punch", and indicate the intensity and head-to-head posturing that new entrants often display to compete with existing rivals. Lumpkin and Dess's (1996, 2001) contention was that competitive aggressiveness represents the level of intensity of a firm's efforts to compete while pro-activeness represents firm's forward-looking view of marketplace and future demands and they empirically established pro-activeness and competitive aggressiveness as two separate and independent dimensions of EO Construct. The fifth dimension of EO construct is the desire to act autonomously, as strong layers of bureaucracy and established organizational traditions don't facilitate entrepreneurship, as firms must exercise the freedom to act independently. Building on the work of past researchers Burgelman, (1983) highlighted that entrepreneurial behavior was both generative and creative, requiring independent and autonomous actions by individuals and organizational actors. Autonomy is the independent action undertaken by entrepreneurial leaders or teams directed at bringing about a new venture and seeing it to fruition. Table 1 provides a summary description of five dimensions of EO construct, as used in the present study:

TABLE 1: Definitions of EO Dimensions

S.No.	Dimension	Essence of Definition
1	Innovativeness	A firm's propensity to engage in and support new ideas, novelty, experimentation and creative processes.
2	Pro-activeness	Taking initiative by anticipating and pursuing new opportunities.
3	Risk-Taking	The degree to which firms are willing to make large and risky resource commitments.
4	Competitive Aggressiveness	Refers to the firm's willingness to directly and openly, and aggressively challenge its competition.
5	Autonomy	Refers to acting independently, making key decisions, and moving forward regardless of constraints and obstacles.

Following the work of Miller (1983) and Lumpkin & Dess (1996), researchers in the field of EO have been

divided on the issue whether to measure EO construct is best represented through three dimensions or five dimensions. Most researchers have adopted EO as either comprising three dimension of innovativeness, pro-activeness or risk-taking or five dimensions by adding competitive aggressiveness and autonomy to the earlier three dimensions (Covin & Lumpkin, 2011; Rauch et al., 2004). But clarifying exactly the composition of EO Construct is very important as this would influence how the phenomenon is measured (Covin et al., 2006; Kreiser et al., 2002) and this has remained a debatable issue allowing researchers to adopt any of these two approaches while examining the composition of EO Construct. George & Marino (2011) highlighted the difficulties of these two conceptualizations by stressing that a good construct specifies the domain of a construct in such a manner that allows researchers to distinguish it from others. Miller (2011) while highlighting on the remarkable attention received by EO acknowledge the ongoing debate about the composition of EO Construct and argued for the need to examine the construct through five dimensions.

2.3. INDEPENDENCE OF EO DIMENSIONS

Miller (1983) defined EO construct as requiring concurrent exhibition of innovativeness, risk taking, and proactiveness, whereas Lumpkin and Dess (1996) conceived of EO as having five dimensions by adding competitive aggressiveness and autonomy and held that these dimensions vary independently and each of the dimension can range from "low" to "high." Miller (1983) gave the rationale as to why the dimensions co-vary; In general, theorists would not call a firm entrepreneurial if it changed its technology or product-line (innovated.) simply by directly imitating competitors while refusing to take any risks. Some proactivity would be essential as well. By the same token, risk-taking firms that are highly leveraged financially are not necessarily entrepreneurial. They must also engage in product-market or technological innovation. Covin & Slevin (1991) in their model of firm level entrepreneurship explained that EO comprises three dimensions and they co-vary. However in his critique Zahra (1993) suggested that all firms engaged in entrepreneurial activities would not exhibit high level of all three dimensions. He argued;

"To treat all firm level entrepreneurial activities as requiring the same skills is misleading and to avoid this problem, it would be useful to extend Covin & Slevin's (1991) model by specifying the type of entrepreneurial venture. This extension will help encourage researchers to further classify different type of firm level entrepreneurial activities".

Lumpkin and Dess (1996) offered an alternative perspective that though all five dimensions are central to understanding the entrepreneurial process, they may occur

in different combinations, depending on the type of entrepreneurial opportunity a firm pursues. They further argued that firm characteristics like its age, size and type may vary firm's approach towards different dimensions of EO as young firms might exhibit higher focus on innovativeness and proactiveness whereas older and larger firms may require greater autonomy and competitive aggressiveness. Firms may be entrepreneurial even when they exhibit certain level of imitateness than innovation (Nelson & Winter, 1982), an imitation strategy does not exclude proactiveness, risk-taking or other forms of entrepreneurial behavior. Research has shown that entrepreneurial firms to be moderate in their willingness to take risks (McClelland, 1965), or have a desire to avoid risk (Brockhaus, 1980) but high in their inclination towards innovation (Schollhammer, 1982). Webster (1977) used a mathematical calculation that is, the expected financial return to new ventures, his approach relies little on creativity or pro-activeness that may be required by entrepreneurial firms but focus primarily on risk. Lieberman and Montgomery (1988) highlighted the advantage gained by first-mover firms through proactive behavior to realize benefits over follower firms. Cooper and Dunkelberg (1986) suggested that various paths to business ownership constitute different degrees of entrepreneurship. They mentioned that starting a business requires initiative, creativity, and personal risk taking, but entrepreneurial owners who obtain their position by inheritance are not required to be innovative or to assume a substantial degree of risk generally. Based on these arguments Lumpkin & Dess (1996) argued that an attempt to limit entrepreneurial behaviour to only those cases where high level of all EO dimensions is required evidently falls short of explaining many types of entrepreneurship. Therefore EO represents a continuous variable (or set of variables) from "low" to "high" on two extremes upon which all organizations can be positioned or plotted. This means that all organizations fall somewhere along a conceptual continuum ranging from conservative (the "low" end) to entrepreneurial (the "high" end).

Most studies have treated EO as a gestalt construct comprising three dimensions of innovativeness, risk-taking and pro-activeness, which co-vary. Though this approach is parsimonious, it limits the scope of defining an entrepreneurial firm only on the simultaneous display of these dimensions in equal measure. It neglects the individual influence of EO dimensions (Hughes & Morgan, 2007) and makes it mandatory for a firm to display all dimensions in equal measure to be categorized as entrepreneurial. The empirical findings supporting the uniqueness of individual dimensions of EO (Hughes & Morgan, 2007; Kreiser et al., 2002; Stetz et al., 2000) have been increasing and this imply the likelihood of different dimensions varying independently. Krieser & Davis (2010) strongly argued that dimensions of

EO vary independently and the individual sub-dimensions of EO offer unique contributions to firm performance. Xiao Zhang et al., (2012) held that EO is a multidimensional comprising dimensions that vary independently and regretted that most previous studies have not examined how different EO dimensions contribute to firm growth and their internationalization process. Wales et al., (2013) mentioned that assuming the uni-dimensional nature of EO Construct where the dimensions co-vary may put more strain on firm resources whereas the individual EO dimensions may have cost-benefit trade-offs. Li Dai et. al., (2014) mentioned that the treatment of EO as a uni-dimensional construct where the dimensions co-vary, constrains the ability to understand the precise aspects of EO, which help firms to achieve their outcomes. If the distinctive contribution of each dimension of EO is not equal across all variables then failure to acknowledge this in developing an overall construct of EO may end up in biased measurement.

3. NATURE OF EO CONSTRUCT

Increasingly EO construct is considered as a multidimensional, latent, higher order construct, which is assumed to lead to its measures or is assumed to result from its measures. Latent constructs are "phenomena of theoretical interest which cannot be directly observed and have to be assessed by manifest measures which are observable" (Diamantopoulos, Riefler, & Roth, 2008), i.e the dimensions of EO construct in this case. As highlighted by George (2011), a multidimensional construct like EO can be considered as a latent construct whose meaning is reflected in its dimensions, referred as a reflective second-order model, in this case changes in EO result in changes in each of its dimensions such that they 'reflect' the higher order construct. Conversely, a multidimensional construct can be thought of as being created by a linear combination of its dimensions. In this case, EO is 'formed' by combining the dimensions and changes in EO are result of changes in one or more dimensions rather than vice versa, this is referred as a formative second-order model. MacKenzie (2003) argued that a failure to clearly define a construct makes it difficult to specify how it relates to its dimensions. When the presumed direction of causality is from the construct to its measures, reflective model is appropriate whereas when the presumed direction of causality is from the measures to the construct, formative model is appropriate. In a reflective model, the construct produces the measures; whereas in formative model, the measures produce the construct.

3.1. EO AS A REFLECTIVE SECOND-ORDER CONSTRUCT

One way of examining EO as a multidimensional construct is the way in which the dimensions are manifestations of this construct. In this model, the multidimensional construct represents a common factor for the first order construct and, for this reason, is sometimes referred as a factor model (Law and Wong, 1999). MacKenzie et al. (2005) mentioned this type of model as a reflective second-order construct since the first order construct, which are the dimensions of EO are reflective of the common, higher order construct. For EO, it implies that a change in a firm's entrepreneurial orientation would result in a change in its all dimensions but a change in one dimension alone would not be reflective of a change in EO. So EO is a latent construct represented by the degree to which an organization is innovative, proactive, and risk-taking, aggressive and autonomous. This would be consistent with the description that EO is the simultaneous exhibition all dimensions as put forth by Covin and Slevin (1991) that the dimensions are merely behavioural manifestations of an overall strategic posture. Since the dimensions are reflective of multidimensional construct, whether there are three or five dimensions is irrelevant but the important fact is that the dimensions co-vary. Thus, if EO is viewed as a 'Reflective-Second Order' construct it endorses the view articulated by Miller (1983) & Covin & Slevin (1989) that the EO dimensions co-vary.

3.2. EO AS A FORMATIVE SECOND-ORDER CONSTRUCT

Sometimes the dimensions combine to form higher order construct and this multidimensional construct is called a formative second order construct (MacKenzie et al., 2005). In contrast to reflective model, the structural paths in this model go from dimensions to the construct, theoretically, this implies that meaning of this construct emanates from the dimensions to the higher order construct. So, if formative model accurately portrays the definition of EO, there is no reason that dimensions of EO Construct can't vary independently of each other. Since the construct is formed by creating composite of dimensions, failure to include any dimension will inflate the error associated with the construct as the specific variance for that dimension would be attributed to error variance, so in this case number of dimensions explaining the construct becomes an important issue. Another difference between the formative model and reflective model is the relationship between EO and other constructs in a causal model. Since the dimensions in a formative model represent different aspects of the conceptual domain, they would not necessarily be expected to have similar antecedents and consequences (MacKenzie et al., 2005), so EO can be defined by a combination of these dimensions. Therefore, researcher would need to examine

how each dimension would be related to the construct and then determine the nature of relationship between dimensions and EO, so the question of interest may be which dimensions are more important (Hughes & Morgan, 2007).

FIG 1: EO as a Reflective Second-Order Construct

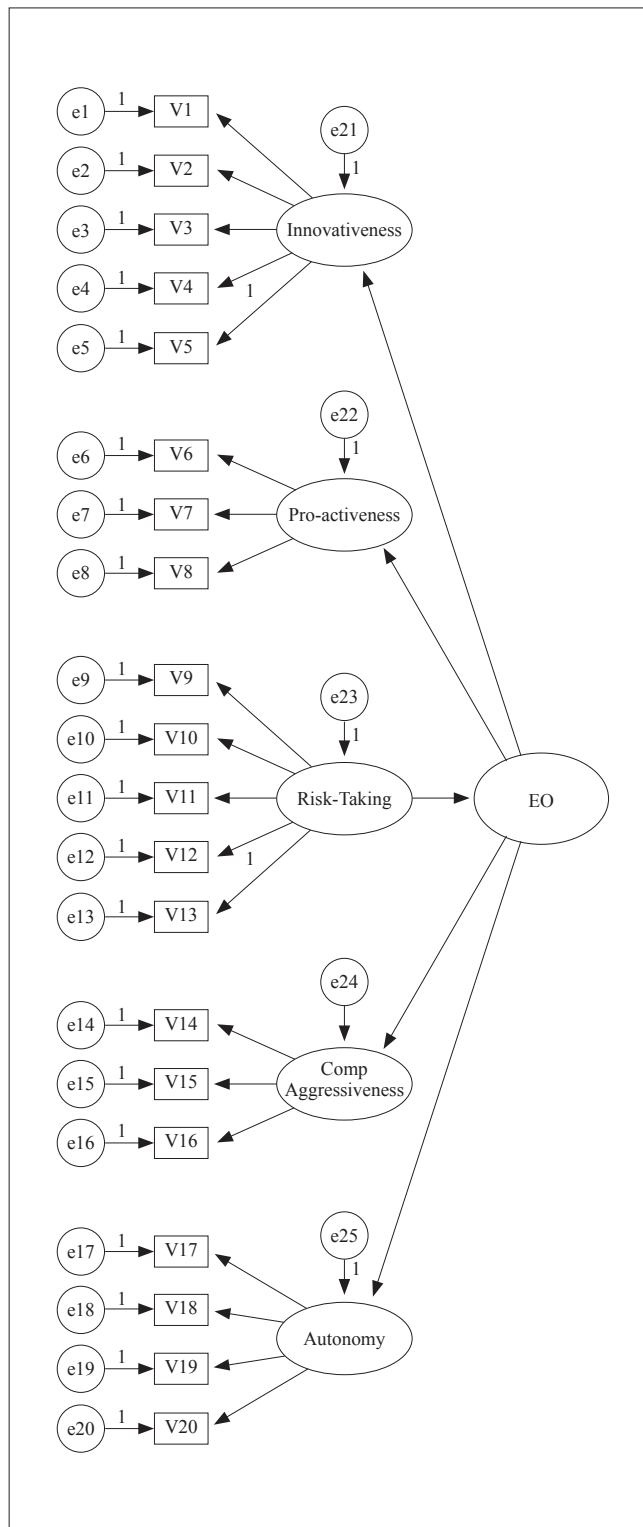
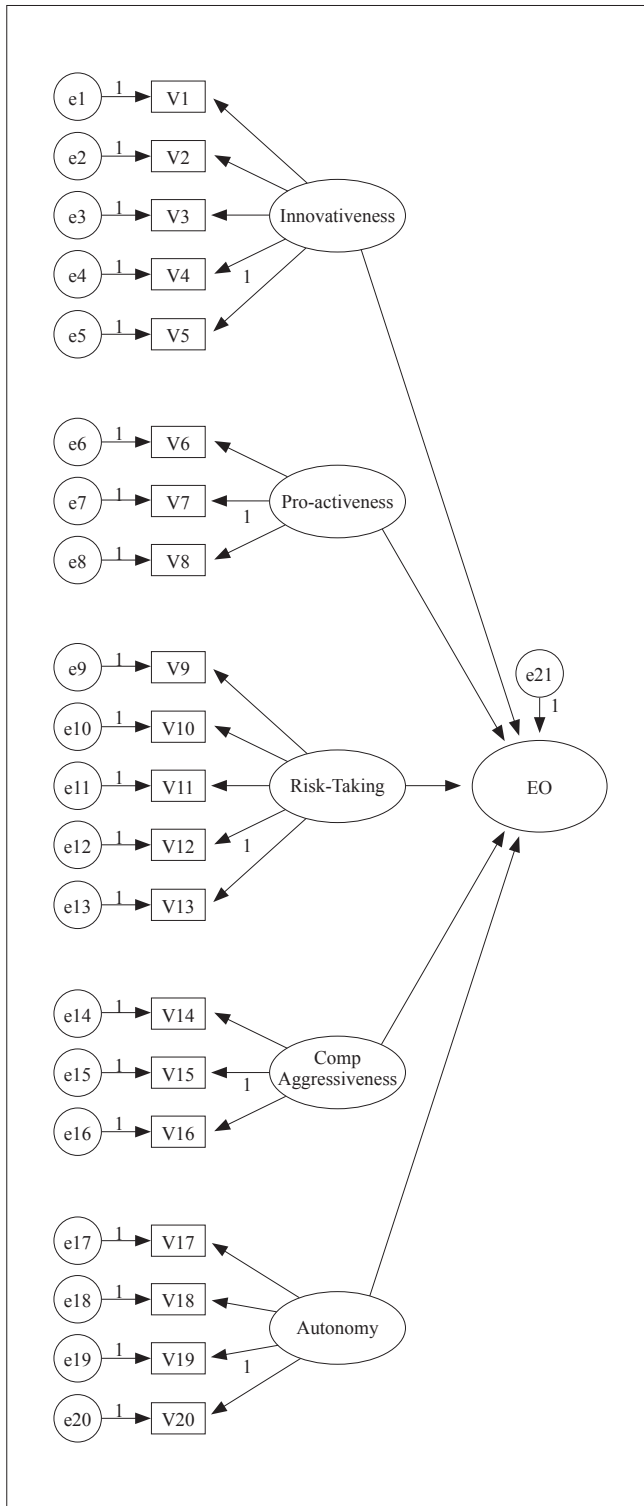


FIG 2: EO as a Formative Second-Order Construct



3.3. DISCUSSION

Given the increasing research interest in entrepreneurial orientation, it seems appropriate to step back and re-exam-

ine the theoretical development of the construct. This paper examines three key fundamental issues about Entrepreneurial Orientation (EO) Construct; one the composition of construct comprising three or five dimensions; two whether these dimensions co-vary or act independently and third whether EO Construct is better explained through formative model or reflective one. The answer to these theoretical issues will help researchers to appropriately conceptualize EO Construct in terms of number of dimensions and the relationship between those dimensions and whether the dimensions co-vary or act independently resulting in better theory building in this field leading to empirical validation. The issue whether EO should be considered as a latent higher order construct whose dimensions are reflective or whether EO is formed by combination of its dimensions i.e formative construct. This question relies on the definition of EO and its relationships with its dimensions as George & Marino (2011) highlighted the difficulties of these two conceptualizations by stressing that a good construct specifies the domain of a construct in such a manner that allows researchers to distinguish it from others. Miller (1983) stated that ‘an entrepreneurial firm is one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with “proactive” innovations’. The use of the word ‘and’ implies that all components must be present, suggesting a reflective second order construct. However, he goes on to state ‘we can tentatively view entrepreneurship as a composite weighting of these three variables’. The use of a composite implies a formative model and further research in this field by Lumpkin and Dess (1996) and Hughes and Morgan (2007) and many other researchers highlighted this approach.

If the dimensions are reflective of the higher order EO construct, then number of dimensions is not a critical issue but the co-variance of dimensions is as they have to co-vary. On the other hand, if EO is formed by a combination of its dimensions i.e formative construct, then it is important to ensure that all dimensions of the construct are represented but the dimensions vary independently rather than co-varying, so the critical issue is whether the EO construct is better explained through formative or reflective construct as this is the key to resolve the other two issues; number of dimensions comprising EO Construct and the co-variance/independence of these dimensions. If EO is reflective construct then the dimensions comprising this construct co-vary rather than acting independently and the number of dimensions in this construct is not the relevant question whereas if EO is formative construct then the number of dimensions comprising this construct is the key issue though these dimensions can vary independently. In this case, the focus should be on how to influence the dimensions of the construct as increase in any of the dimensions individually will

increase the firm's EO. Whereas if, EO is a reflective construct, then it is important to understand how to influence the overall EO and this will be manifested in higher risk-taking, pro-activeness, innovativeness, aggressiveness and autonomy. Since this paper argues that EO Construct comprises five dimensions, which vary independently, so formative model of EO Construct not only better explains the construct formulation but also addresses the issue of composition of EO Construct through five dimensions, which vary independently. This paper argues that EO as a formative construct is more appropriate and robust as it shows promise for scholars and practitioners in explaining its composition and independence of individual dimensions as it vastly expands the scope of definition of entrepreneurial nature of firms.

4. CONCLUSION

Even though there is still no consensus regarding composition of EO Construct in terms of number of dimensions, an approach where EO dimensions vary independently is slowly becoming part of mainstream research. The central argument of this research is that EO comprises five dimensions of innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy, which vary independently. All these dimensions may be present when a firm makes a new entry; in contrast, successful new entry may also be achieved only when some of these dimensions are present in different combinations. The extent to which each of these dimension is useful for predicting the nature and success of a new undertaking depends on various factors. These views are consistent with Gartner's (1985) observations regarding new venture formation:

The creation of a new venture is a multi-dimensional phenomenon; each variable describes only a certain dimension of the phenomenon and entrepreneurial firms vary widely; the actions they take or do not take and the environment they operate in and respond to is equally diverse-and all these elements form complex and unique combinations in the creation of each new venture.

While this paper has focused on conceptual and theoretical issues for researchers, it should be noted that there are implications for practitioners also. If EO is a formative construct, the focus for managers/owners should be on how to influence the individual dimensions of the construct, which are relevant as increase irrelevant dimensions will increase the firm's EO resulting in higher performance. On the other hand, if EO is a reflective construct, then it is important to understand how to influence the overall EO and this will be reflected in higher risk-taking, pro-activeness, innovativeness, competitive aggressiveness and autonomy. As increas-

ing one of the dimensions in isolation will not increase the EO of firm. Miller (2011) while reflecting on the progress made in the field of EO research acknowledged the need to examine the multidimensional nature of EO Construct comprising five dimensions where they vary independently as sometimes the components or dimensions are more important for understanding entrepreneurial behaviour of firms. In conclusion, the EO phenomenon has been the subject of close to 30 years of theoretical and empirical inquiry and the promise of this concept lies within its ability to further our understanding of the entrepreneurial activities pursued by organizations. However, the matter of how EO should be assessed has not received enough research attention, hopefully, observations made in this article will serve as valuable reference point and future research would test this conceptualization in different contexts.

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